OCTOBER, 1954

Traffic Engineering

Photo by courtesy of Bureau of Public Roads

The Eastshore Freeway at San Francisco

- **Public Relations and the Traffic Engineer**
- **An Automatic Method of Collecting Data on Traffic Performance**
- **Urban Transit Control and Financing Trends**

Official Publication of the Institute of Traffic Engineers

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Traffic Engineering

OFFICIAL PUBLICATION OF THE INSTITUTE OF TRAFFIC ENGINEERS

VOLUME 25 OCTOBER, 1954 NUMBER 1

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COVER: This photograph looking toward downtown San Francisco shows the six-lane Eastshore Freeway. In 1953 its length was 14.57 miles and its Annual Daily Traffic was 47,910 vehicles. The accident frequency rates per hundred million vehicle miles last year were 138 accidents, 50 injury and fatal accidents, and a fatality rate of 2.60. California's new accident report system is showing that six- and eight-lane facilities have fewer accidents on a vehicle mile basis than four-lane freeways.

DEFINITION: Traffic Engineering is that phase of engineering which deals with the planning and geometric design of streets, highways, and abutting lands, and with traffic operation thereon, as their use is related to the safe, convenient, and economic transportation of persons and goods.

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Frankly Speaking

THE INSTITUTE now enters its 25th year of existence. It was 25 years ago that 19 traffic engineers assembled in Pittsburgh to exchange ideas and seek means by which developments in a new profession could be pooled and passed on to others.

The growth of the Institute from 19 members to nearly 1,000 members and chapter associates has witnessed and almost paralleled the growth of the automobile industry, the pace of which has been unequalled in all history unless perhaps by radio.

From a five-man Board of Direction and a budget out of a "cigar box" circulated at the annual meetings plus assistance from several organizations, the Institute has graduated to an eleven - man board, an annual meeting costing about $10,000 and a yearly operating budget approaching $45,000. It is almost certain that such rapid expansion was not foreseen.

The Board comprises six directors, each representing a certain area of the United States and foreign nations. This means that every member of the Institute, so to speak, is represented on the Board. It is each member's responsibility to contact his director concerning policy and Institute affairs that may or may not require Board action. Therefore, we should all take advantage of our organization's democratic form of representation.

In recent years we have seen the development of our technical council to further research and develop new techniques of the traffic engineering profession. Each of the seven department of the technical council has a specific area of study and research. Here it is emphasized that the doors are not closed to the membership. Any one interested or having a desire to take part in this important Institute activity is urged to volunteer for committee appointment.

The 11 local sections and four student chapters are also an important part of our organization. Through the local sections the traffic engineering profession and the service of the Institute can be in close contact with officials responsible for efficient transportation. We must make our sections strong in existence and looked upon for guidance by local officials and citizens for information on a scientific approach to the increasing traffic problem.

During the coming year our public relations program must be expanded so that all associated national organizations become better acquainted with us—and have a better understanding of the purpose and objectives of the Institute. Safe, convenient and economical transportation cannot be accomplished alone through traffic engineering. Cooperation with other agencies concerned is essential.

Another problem that needs serious attention during the coming year is a definite policy on traffic engineering administration in smaller communities. Many officials in these municipalities will and have looked for advice and guidance from Institute members. There is no question that traffic engineering counsel is urgent in such places.

With coordinated help and effort the coming year can be a "Silver Year" for the Institute.

Harry Porter Jr.

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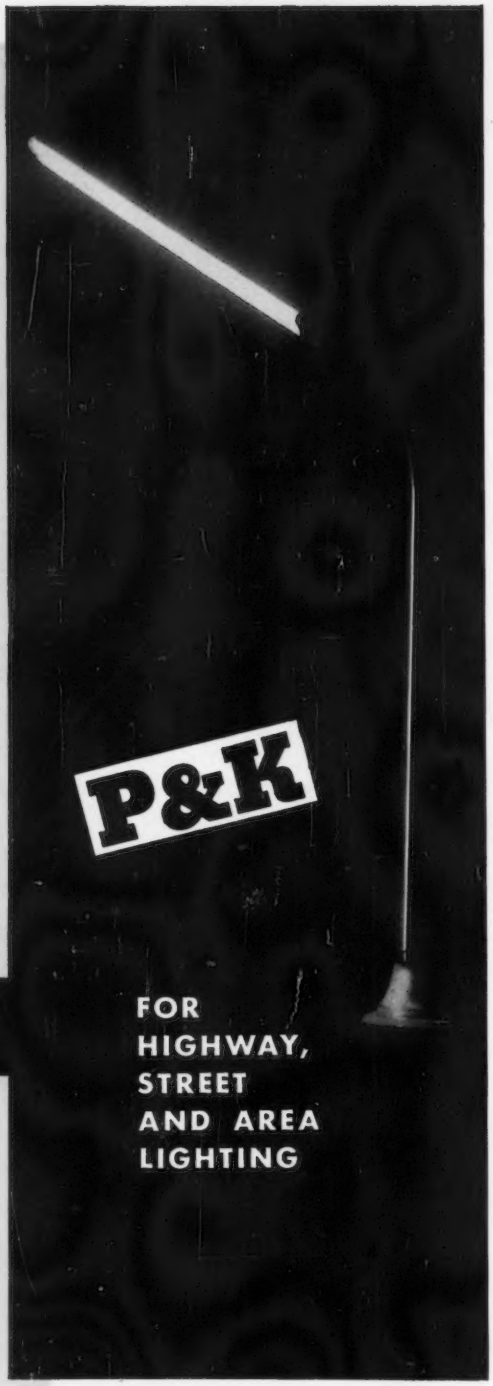

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Public Relations and the Traffic Engineer

By Harold L. Michael (Assoc. Mem., ITE)

Assistant Director, Joint Highway Research Project, Purdue University, Lafayette, Indiana

This paper was presented at the 40th Annual Road School at Purdue University from April 19-22, 1954.

THE MEANS of dissemination of traffic information to the highway and traffic engineer is quite reliable. We are all aware of the volumes of information that a traffic engineer can collect and all the traffic and highway facts that he has at his fingertips that help him provide answers to traffic and highway problems. But how much of this traffic information is actually translated into action programs, into the construction of recommended facilities, or into the initiation of operational programs? I would venture to say that there is not nearly enough.

Without exception, all programs of improvement depend on the intelligent and continuing support of the people of the affected area. This support is not generated in a vacuum. It doesn't multiply of its own accord. No, it grows only from the firm roots of personal knowledge and is nurtured by the leadership of responsible citizens. In short, support for any program demands the widest possible dissemination of the facts concerning the highway and traffic program. Each citizen must be made to recognize that he has personal responsibilities in the program; he must be made to realize that his cooperation is desired and is essential.

Who Should Inform the Public About the Traffic Program?

The public information job in traffic programs is the responsibility of several groups.

First, it is a major responsibility of the traffic engineer. No other person in the highway field is as close to the man in the street as the traffic engineer. The problems that he

Fig. 1
Displays, like this one at the Road Show of the Annual Purdue Road School, can be used to tell the public the problems of transportation and how to solve them.

tackles are the everyday problems of the public and are problems about which they should be well informed. Included in this group are other public servants, engineers, administrative officials, and enforcement officials. They can help but they require someone who can lead them, who can answer the engineering questions which they have, who can give them the facts to sell the program.

The second group is composed of the normal media of public information—newspapers, magazines, radio stations, posters, car cards, window displays, and other displays. In almost every case this group is ready and willing to assist you in a presentation of the program you desire. They must, however, have some source of reliable information and the best source of that information is the developer of the traffic program, the traffic engineer.

The third group is that core of civic-minded citizens which exist in every community. Civic organizations; professional groups; and business, industrial, and religious groups offer fertile areas of cooperative leaders. Here again, however, the traffic engineer has a job. He must first of all inform this group and present them with the information that they must have in order to sell the traffic program.

Your task as a traffic or highway engineer then includes being a good public relations man. It includes the assembling of information and its distribution to the public. It includes the preparation and deliverance of speeches, the showing of films, and other informational activities. It includes the preservation of good press, radio, and television relations and the supply of the proper information to them.

What Should the Public be Told?

There is a tendency that those associated with any traffic program will both overestimate the knowledge that the public has about the problem and underestimate its capacity to absorb facts. We who are familiar with the common facts of traffic engineering may forget that the average citizen, even though he may think of himself as a traffic expert, actually knows very little about traffic engineering. First of all then, we must supply them with the basic facts of our program and logically sell the program to them.

We also must not withhold portions of the program because the public wouldn't understand it. How do we know they wouldn't? Actually many of the citizens of a community will understand most of the material which you are able to give them, and that which they don't understand, they will appreciate. They can't appreciate it if they don't know about it.

One of the areas where we do the poorest job of public relations is in telling what we have done and the results that have been accomplished. Too often the facts on why we should do something are obtained, the program eventually is placed in operation and after a few months the new program is accepted as the way things always were. The public watches its servants closely and unless they are continually informed of what they are getting from your department, they may get the impression that you are doing very little. Maybe you are, but if you are doing a good job, tell them about it. That is the only way that you can place traffic engineering in its rightful place in your area. That is the only way that you can hope to get a larger staff, a larger appropriation, a bigger voice in the solution of the traffic problems of your city.

As an example of the tendency of traffic engineers to neglect to inform the public on the results of their services I would like to mention a few typical cases.

Many cities in Indiana have in recent years inaugurated one-way street systems. Prior to the initiation of the systems, most engineering departments discussed widely the advantages that the city could expect from one-way streets. They mentioned decreases in the number of accidents, increased capacity, and better travel times among other things. Public relations in most such instances tend to be fair, but after the one-way streets are placed in operation what happens? Usually very little. The engineering department might actually determine the amount of the decrease in accidents, the increased volumes that are being carried, and the decreases in travel times; but very few of these departments give such material any publicity; practically none give it wide publicity. The motorist, especially if he opposed the program, may refuse to see even those benefits which are obvious because of his biased attitude, but a continual deluge of facts will in time convert many such opposers to supporters. Certainly you will never be able to convert everyone, but an enlightened group of supporters who know the facts about your program can usually handle any opposition based on nothing but prejudice.

Another source of good public relations that is only rarely used concerns money. Nothing is closer to the heart of the citizen than money, and he likes to know what he receives for his money. We generally do a fair job telling the taxpayer what a program is going to cost or how much money we need to alleviate the traffic problems of the city, but only rarely do we tell him what he has received for his money in recent weeks, months, or years. How many citizens of your city do you think have a knowledge of the improvements that you have initiated in recent years, the benefits that they are receiving from them, or the cost of these improvements? Very few is right. How many motorists realize the small amount they pay for upkeep of their city streets and their rural highways in comparison with what they spend on their automobile? Again, very few.

Of course, you can't present the traffic statistics or the expenditures and receipts as just simple cold figures. They must be dressed up, presented in simple, eye-appealing form, and made attractive to the public. Neither can you discuss your program or your accomplishments in an unenthusiastic manner. You must appeal to the emotions; you must present your material with enthusiasm; and you must present it as a challenge to each of your listeners.

Public relations is not a job that requires fluctuating attention, but rather one that requires constant attention. Just as an attack on traffic congestion, it requires a well-planned and balanced program. The most effective public relations job will not be a transient promotion nor a publicity campaign—it will be a continuous, long-range, and large scale effort. It must continue as long as there is a traffic or highway program.

However you handle your public relations, you have a big job on your hands. In the end your purpose is to make each individual feel that he is responsible for part of the solution to the traffic problem and your traffic program, that he is capable of handling a part in it, and that he can begin at once. But you must go out and tell him. After that your job will be easier, more secure, and more rewarding.

As an example—undoubtedly not the best—of how we might begin to get the motorist to work with us and for

Fig. 2

Motorists understand and are interested in traffic volumes. This three-dimensional map of traffic volumes on the main Indiana highways has created a favorable impression at every showing.

us, the following article that is addressed to the motorist is presented. Such an article if published as an illustrated pamphlet would be one way of initiating a public relations program.

Again, note that this article is addressed to the average Indiana motorist. We are attempting to tell him how the traffic problems are being tackled, that he has a big part in helping solve the problem, what he can do, and how he can do it. The article is entitled:

IT'S YOUR TRAFFIC PROBLEM

Did you find a good place to park today? Did you find cars and trucks impeding your freedom of movement, wasting your time and gasoline, and upsetting your nerves? What are you doing about this problem? What is anyone doing about it?

If things keep going as they are, there will likely be 40 to 60 per cent more traffic by 1960 than there is now—yes, by 1960, just seven short years away. What do you think traffic jams will be like in 1960? Well, that depends on you. There is actually a lot that you can do to minimize the traffic problems of the present and the future. First, however, let's look at what others are doing in Indiana.

Traffic Experts Are at Work

Here in Indiana, numerous studies have been and are being made of the traffic problem. A number of cities have traffic engineering departments that are staffed with trained engineering personnel; other cities, small in size, have cooperated with neighboring communities to jointly acquire the services of a traffic engineer. These cities have found that the application of engineering science to this problem is just as rewarding as it was to the construction of our highway system. The State Highway Department maintains a Traffic Engineering Department, a Metropolitan Area Traffic Survey Unit, and a State-wide Highway Planning Unit. All of these are engaged in the study and solution of traffic problems in all parts of the state. They have provided assistance to many of our cities and will, no doubt, continue to do so. The Metropolitan Area Survey Unit has performed Comprehensive Traffic Surveys in almost every one of the larger cities and in a few of the smaller ones. These surveys, as the name implies, are designed to collect all the facts on traffic movements—the origins, destinations, volumes, and purposes of trips; the locations and causes of delay; and the amount of parking spaces, demand, and use.

Purdue University has also contributed a great deal to the solution of the traffic problem through teaching, extension, and research. Courses in Traffic Engineering are available to undergraduate and graduate students in Civil Engineering, and several graduates manage the Traffic Engineering Departments in some of our Indiana cities. The Purdue Public Safety Institute conducts courses in driver training and motor vehicle safety and assists in the establishment of accident-record-analysis procedures and the evaluation of enforcement policies. A unit to provide extension service has also been organized in the Joint Highway Project of the University to offer advice and counsel in traffic engineering to the cities and counties of Indiana.

The University, also through the Joint Highway Research Project, has cooperated with the Metropolitan Area Survey Unit of the State Highway Department in performing comprehensive surveys in several cities. Faster and more economical methods of collecting data have been developed, and the importance of the city and its individual citizens in solving its own traffic problem has been noted.

One Big Problem

The complete traffic problem includes many smaller problems—movement, parking, pedestrians, violations, accidents, etc. The solution of any one or two of these factors, however, will actually do very little to solve the complete problem. In fact, such a solution may cause it to become worse. For example, a solution to the traffic movement problem into and out of a business district would bring more people downtown faster but would not provide them a place to park. The same is true of any part of each problem. The construction of a modern, multilane bridge across a river and terminating on each side at an inadequate two-lane street would certainly present no movement solution. In this latter case, adequate approaches to the bridge and approach streets with proper capacity must be provided at the same time as the bridge. This means that a thorough study of the patterns of traffic movement in the entire city is necessary.

Traffic and Parking Plan Required

Actually, the only good method of approaching the traffic problems of the city is through a complete study of the traffic conditions in the city. The traffic patterns—where people desire to travel and where they actually do travel—must be known if any permanent solution is to be found. The collection and analyzation of these basic traffic facts in your city should be the first step. This is obviously not a job for just anyone. Trained personnel are necessary to plan and administer such a study and to make recommendations to the city from the facts. Your city's Traffic Engineering Department, the State Highway Department, and consulting engineers are capable of performing such a survey.

From such a collection of facts, a Traffic and Parking Plan should be established. The magnitude of the problem requires that progress be orderly, efficient, thorough, and economical; a Plan is the only way to assure such progress. The facts will clearly point to the most important problems, the methods of solving these problems, and the effects of each solution. Solutions can then be programmed in a wise and economical manner.

Your part in the preparation of this Plan is seeing that it is developed. Very few cities have a comprehensive Traffic and Parking Plan, and too many of those that have one are not following the plan to reality. It requires that you, your neighbor, and his neighbor demand the development of a Plan; the adherence to that Plan; and the constant review necessary to meet changing conditions. Your interest expressed directly to your governmental officials or to them through a Citizens Traffic Committee will produce results.

Other Work to be Done

While this plan is being developed—and it may require a year or so—there are several traffic factors that should be given attention. At least six items require improvement in almost every city and, if accomplished, promote the safe and efficient movement and parking of traffic.

Fig. 3
A complete plan of attack must be prepared.

Keep Thoroughfares Open

(1) Keep your main thoroughfares open to maximum traffic movement.

Highways were built for the movement of traffic and not for the storage of vehicles. It has been found, moreover, that the flat parking on one side of a street decreases the effective width of that street for moving traffic by as much as 14 feet. Consequently, a trend to prohibit parking on our main thoroughfares is natural, sensible, and an actuality. Curb parking space has been necessarily decreasing for years and will in the next few years be prohibited on our most important city streets. Each motorist must understand that parking on-street is a privilege and should encourage the elimination of that privilege wherever the streets are congested. No other single method will do as much to increase the ability of a street to carry moving traffic.

Double parking and other parking violations should, of course, not be tolerated. Penalties must be of such a nature that these violations become unpopular. They are not so now, however, for they number in the hundreds in almost every city in Indiana on every day.

Most of the decrease in the ability of a street or highway to carry moving traffic is due to an increase in the number of traffic conflicts on that thoroughfare. A new facility usually carries large volumes of traffic without congestion because it was constructed to minimize traffic conflicts. Congestion with little or no increase in volume will result, however, if traffic conflicts are permitted to multiply at numerous exits and entrances. A sensible solution is to limit the number and location of exit and entrance points on such a thoroughfare to a few major locations and provide local, parallel access roads for the development along the thoroughfare. Experience has proven that development is not retarded and that traffic movement is thus maintained.

More Parking Space Is Required

(2) Provide additional parking space off-street near the center of your commercial district.

There are four types of parkers which must be supplied. They are the loader, short-term parker, shopper, and long-term parker. All are best accommodated in off-street space because of their conflict with moving traffic while parked at

Fig. 4
Then you must sell the plan.

the curb and during the parking and unparking operations.

If the recurrence of loading demands results in necessary double-parking, a loading zone must be provided, but on-street only as a last resort.

A short-term parker will walk about 300 feet and no farther. He is running an errand for a particular purpose and will drive to the store that provides him nearby parking space. These parkers wish to park one-half hour or less but constitute over one-half of all parkers. A great amount of the retail trade comes from these motorists and they must be accommodated if business is to flourish. Customer lots are answers to this problem that should be encouraged, and short-time limits on central area parking may be another. More off-street space in the central area is certainly the best solution.

The shopper wishes to park an average of one and one-half to two hours and will walk several hundred feet farther than the short-term parker. Space within 500 to 700 feet of a downtown district is seldom sufficient to accommodate these parkers, however, and more must be found. The long-term parker is usually an owner or employee and must not be allowed to compete with customers for parking space. If he must drive, he must be forced to park, either on or off-street, several blocks outside the downtown district. He harms his own and his neighbor's business if he is allowed to have a private space near his place of business or to become a nickel-stuffer.

Additional spaces, then, can only and must be provided off-street. This will require, in most cases, the destruction of some developed property and its redevelopment as parking lots or garages. The businessmen have a heavy stake in this problem and should give it their whole-hearted, including financial, support.

Your city should also have zoning ordinances which make the provision for sufficient off-street parking space a requirement for the issuance of a building permit. This is one method that will prevent a constant recurrence of this parking problem.

Uniform Signs and Signals Needed

(3) Standardize your traffic signs, signals, and markings as to location, type, and shape according to the adopted national standards.

The warrants and standards as published in the "Manual on Uniform Traffic Control Devices" by the U. S. Bureau of Public Roads should be followed. They have been developed from years of experience and research and are the conditions which best promote the movement of traffic. Uniformity promotes recognition and increases obeyance, especially by the out-of-town driver, and installation according to engineering warrants insures against installation according to political or opinion warrants. Many signs and signals in our cities were installed without proper warrants and are not promoting safe and efficient movement of traffic. A

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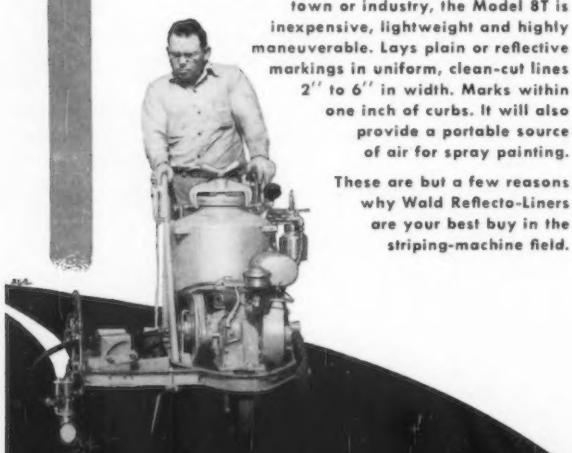

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traffic light, for example, will probably result in restricted traffic movement and more accidents if traffic does not require the signal.

Ride the Buses

(4) Encourage the use of your mass transit system, especially for downtown trips.

One bus can haul 30 or more people; each car carries about two persons. Obviously the more people who leave their cars at home and ride the bus, the fewer will be the number of automobiles moving on the streets and seeking a place to park. There undoubtedly is no other more efficient, economical, and effective method of minimizing the downtown congestion problem than that possible through mass transit.

Courtesy Makes Careful Drivers

(5) Be a courteous and careful driver.

Driving a motor vehicle is a full-time job. When at the wheel of a motor vehicle, no other duty, entertainment, or preoccupation is possible. All of your energies and thoughts must be used to safely operate your motor vehicle. Treat your fellow-driver and your vehicle with respect, give them the courtesy that such respect demands, and you will promote the movement of traffic and increase your chances of not becoming a casualty statistic. You may even lower the insurance rate on your car.

Don't Oppose for Personal Reasons

(6) Don't oppose a traffic plan or a recommendation made after thorough study by traffic engineering specialists because it affects your job, your business, your property, or your taxes.

Study the facts and you will probably understand the soundness of the improvement. Any improvement that is going to be valuable is also going to inconvenience some individuals temporarily. Remember two things, however: (1) The improvement is recommended as a benefit for the entire city and not for individuals and, (2) Whatever benefits the entire city will improve the economic condition of the city and ultimately every individual in it. Opposition for personal reasons is often short-sighted and against the best interests of the city. If you oppose because of cost, remember that the money to develop a sound traffic program is now being spent for lost time and increased cost of vehicle operation. That money only needs to be directed to the traffic program. The greatest cost, in fact, will occur if a program of traffic relief is not developed. Actually, you pay at least eight times more to own and operate your car than you pay for the road on which it must travel. And, lastly, do not inflate the value of your property if it is required for traffic improvements. Your city cannot thus benefit and you have obtained only selfish gain at the expense of your neighbors.

You Can Help

The traffic problem is the number one problem of almost every city in America. Your city has that problem and needs help. Won't you see that the problem is solved? Express your interest; enlist your neighbor; approach the problem with the facts; study the facts; secure competent specialist personnel; develop a Traffic and Parking Plan; carry out that Plan; solve your problem. It is possible, but it's up to you. Cease to be just a part of the traffic problem and become a part of its solution.

An Automatic Method of Collecting Data on Traffic Performance

By K. B. Johns

Traffic Engineer, Division of Traffic, Kentucky Department of Highways, Frankfort, Kentucky

THIS PAPER DESCRIBES a "before and after" study at a signalized T intersection in Frankfort, Kentucky. The study was made primarily to determine the feasibility of collecting data on traffic performance at intersections by using a multi-pen operation recorder. It will be readily apparent that the data collected could not be acceptable in research because of the level of accuracy. However, the results were considered satisfactory in that the data is sufficiently accurate to be usable in a general way and in comparative studies such as the one presented here.

Probably the most accurate method of collecting such data would be through photography, but this method cannot be used satisfactorily unless some means of obtaining sufficient mounting height for the camera is available. Obviously, there are many intersections which cannot be studied in this manner. The need for collecting of such data should be apparent, as should the difficuties involved in its collection by other than automatic means.

The two studies described here involved one engineer, who prescribed the test conditions, and one electrician, who installed the recording devices. The electrician was the only person present during collection of the data and his only function during that time was to insure continuous mechanical and electrical operation of the recording devices.

It was decided to conduct these studies at a T intersection where a vehicular and pedestrian semi-actuated traffic signal was to be installed. Repeated requests for signalization of this intersection had been made, and the complainants frequently offered the familiar "You have to wait five minutes to get out of that street." It was therefore desirable to determine the actual maximum waiting times for individual vehicles, and to determine the actual number of usable gaps available in Artery traffic. It was also desired to determine Artery and Side Street volumes in order to be able to compare actual gaps with predictions based on use of the theory of probability:* In addition to these parameters, it was possible to determine the gaps in Artery traffic which were accepted or rejected by Side Street drivers.

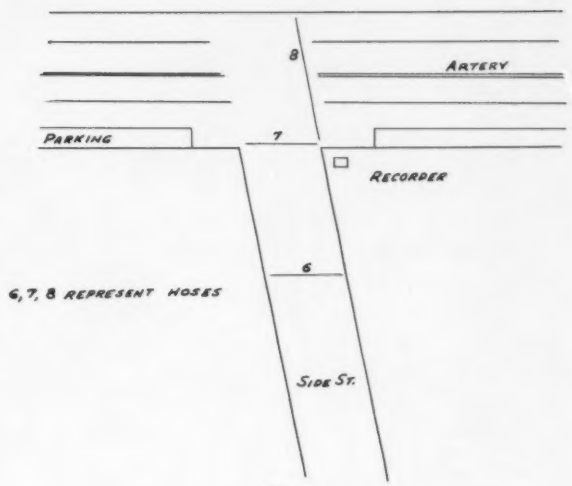

Fig. 1
Before Signalization

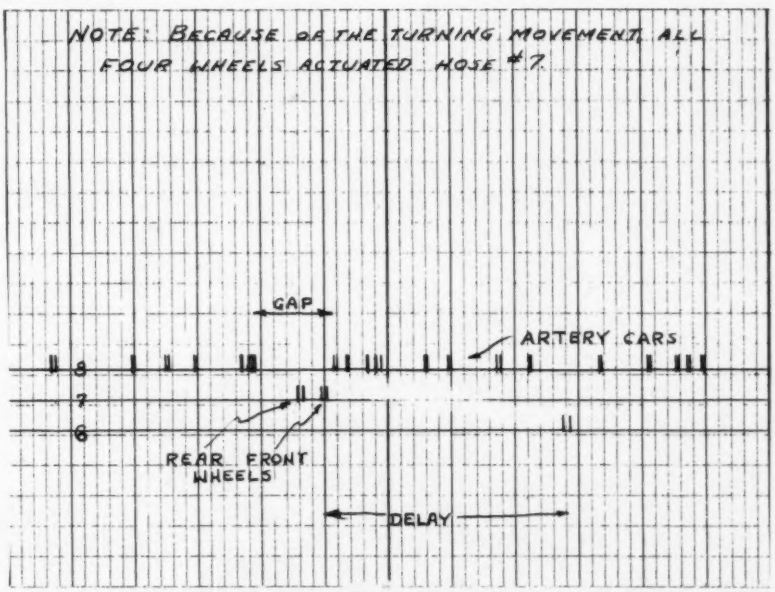

Fig. 2
Chart for 'Before' Study

Figure 1 shows a layout sketch of the intersection with locations of the recording devices used to collect the required data. The study was made during a Friday afternoon rush hour, since this was known to be the period of heaviest vol-

* "Traffic Performance at Urban Street Intersections" by Greenshields, Shapiro, and Ericksen.

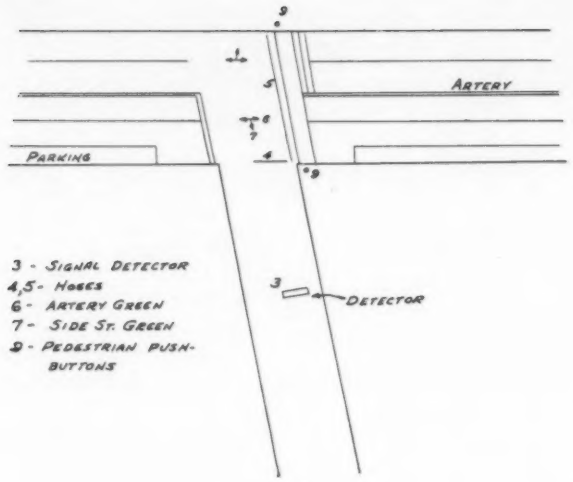

Fig. 3
After Signalization

ume. Figure 2 shows a portion of the recorder chart for the conditions of Figure 1.

In the "after" study, it was again desired to measure waiting times for Side Street vehicles in order to compare delays in the two conditions. Gaps in Artery traffic were, of course, provided by the traffic signal which had been installed.

Figure 3 shows the location of recording devices used in the "after" study and Figure 4 shows a section of the chart for these conditions. In addition to Side Street vehicular waiting times, the following information was gathered in the "after" study:

1. Green, amber, and red time for both Artery and Side Street.
2. Number of pedestrians using the push buttons which had been provided.
3. Main and Side Street volumes.
4. Time required for first Side Street vehicle to enter the intersection after obtaining the green indication.
5. Number of times the Side Street extension feature of the semi-actuated controller was utilized.

Obviously, it would be possible to record volumes by direction, turning movements, signal violations, equipment failures and other information simply by adding other measuring elements. A higher degree of accuracy could be obtained, if desired, by making adjustments in the hose locations after observation of the behavior patterns of drivers using the intersection. Data on delays, gaps and volumes are presented in Table 1.

TABLE I	Main St. Cars	Side St. Cars	Time in Min.	Main St. Avg. Hr. Rate	Side St. Avg. Hr. Rate	Number of gaps per hour of size (seconds) listed, or larger 5	6	7	8	9	10	Avg. Delay (sec.)	Avg. Gap Accepted
BEFORE	850	37	44	1160	50	176	123	100	70	49	39	18.9	*6.5
AFTER	3008	170	190	950	54							16.4	
PREDICTED						144	87	54	34	22	14		

* In determination of the average gap accepted by Side Street drivers, all gaps 8 seconds or larger were reduced to 8 seconds. This was probably valid, since no driver was observed to refuse a gap of 8 or more seconds.

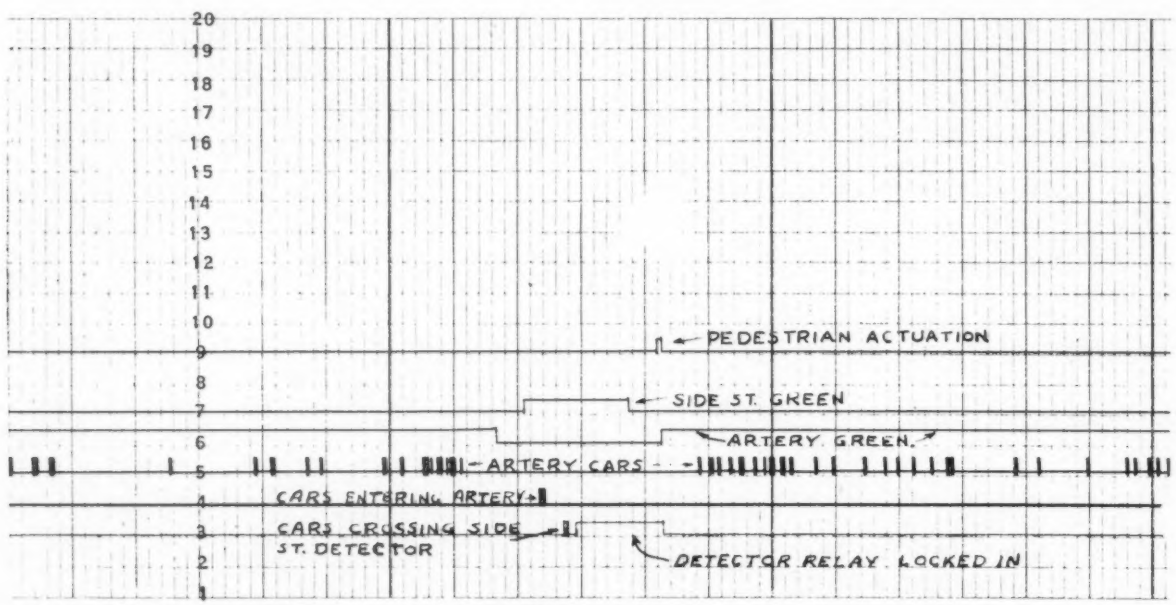

Fig. 4
Chart for 'After' Study

As a result of these two studies, the following conclusions were reached:

1. Maximum delays to individual drivers before signalization were 70, 66 and 40 seconds. The drivers in each case refused gaps of at least 7.5, 6, and 6 seconds, and finally accepted gaps of 7, 7, and 5 seconds, respectively. Such behavior could only be attributed to laxity on the part of the drivers.

Any time of day or night a tourist enters one of these states, he's sure of a warm welcome from friendly entrance signs of "Scotchlite" Reflective Sheeting. "Scotchlite" Sheeting makes the signs shine out at night exactly as they appear by day—*in true shape, true color, true legend.* Impressive by day . . . strikingly beautiful at night when car headlights bring them to life! No wonder 14 state highway departments have already adopted entrance signs of "Scotchlite" Sheeting.

Let us *show* you what we mean. We'll be glad to send a miniature sign made with "Scotchlite" Reflective Sheeting and an artist's design for an attractive "Welcome, Visitor" sign for *your* state. No cost or obligation, of course. Just write: Dept. TE-104, Minnesota Mining and Mfg. Co., St. Paul 6, Minn.

SPECIFICATIONS FOR ABOVE SIGNS:

Actual Sizes: Mississippi—6′ x 10′; Virginia—7′3″ x 6′; Kentucky—3′ x 6′; Alabama—8′ x 24′; Assembled from panels of aluminum, reflectorized over-all with Wide-Angle Flat-Top Silver "Scotchlite" Sheeting. Reverse-screened with Transparent Colors. Reinforced backings. Details on supporting structures supplied on request.

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2. There were sufficient gaps available before signalization to permit safe entry without unreasonable delay.
3. The presence of sufficient gaps in Artery traffic could have been predicted by theoretical means from available traffic flow data, since the measured gaps in all cases exceeded the predicted gaps. It should be possible to predict, with a reasonable margin of safety, the number of usable gaps available in given Artery volumes, provided that these volumes do not exceed the limits of random distribution.
4. Individual delay to Side Street vehicles was not appreciably reduced (18.9 to 16.4 seconds) through signalization. (These average figures exceed actual delay by the average running time between hoses 6 and 7 in Figure 1, and between the detector and hose 4 in Figure 3.)
5. Total intersection delay, therefore, materially increased after signalization due to the stopping of the heavier Artery volumes.
6. The total green time was divided 85.6% to the Artery, 14.4% to the Side Street. Volumes were divided 94.7% and 5.3%.
7. There were not enough gaps of sufficient length available for pedestrians without requiring unreasonable waiting times.
8. There were sufficient instances of signal change because of pedestrian actuations, during which no Side Street vehicles entered the Artery, to justify installation of a pedestrian interval times. (NOTE: Such a timer has since been added, and efficiency of operation has measurably increased, since pedestrians required more time to cross the Artery than did Side Street vehicles.)
9. The maximum delay to individual drivers after signalization was 49 seconds (41 sec. Artery minimum, 5 seconds Artery amber, plus reaction time). This occurred to several drivers and does not represent a material reduction in maximum waiting time after signalization.
10. The data collected was sufficiently accurate for the purpose intended. The results clearly demonstrate the usefulness and versatility of the operation recorder as a means of collecting data on traffic performance. It is felt that the recorder could lend itself to many other types of studies satisfactorily. Among these are:
    (a) Evaluation of traffic signal control efficiency.
    (b) Evaluation of driver observance of traffic control devices such as signals, stop signs, etc. Use of an automatic recorder for such studies would eliminate any possible influence that an observer would exert.
    (c) Vehicle placement and speed studies.
    (d) Accurate determination of delays at intersections by having recorder pens actuated by observers. Such manual studies provide data on time-space relationships which would be difficult to obtain by other than photographic means.

APPENDIX

The recorder used was a Model AW-Fourteen Pen Operation Recorder, a modification of a twenty pen recorder manufactured by Esterline-Angus Company, Inc., P. O. Box 596, Indianapolis 6, Indiana. The solenoids for these fourteen pens were arranged to operate on 5.2, 12, 18 and 120 volts a.c. in order to be able to record events which take place in traffic signal controllers at these voltages. All pens can be used on 115 volts through use of an appropriate transformer. This might be desired, for instance, in an all-manual study, and offers an additional advantage in permitting roving observers to handle low voltages. The recorder is synchronous motor-driven and may be used at chart speeds of ¾, 1½, 3, 6 and 12 inches per minute or inches per hour. A speed of 3 inches per minute was used in the studies reported here. This permits 6 2/3 hours of operation with one standard chart. Spring-drives are also available for use with recorder if a source of voltage is not available. Hoses and diaphragm switches were used to detect vehicles. Small lead expansion shields into which bolts could be turned proved helpful in securing firm mounting of hoses at desired locations.

Urban Transit Control and Financing Trends

By the Editorial Staff

A PROGRAM aimed at improving the mass transit industry's situation in Wisconsin was proposed by industry representatives at a hearing conducted in Madison (July 16) by the Governor's Committee on Urban Transportation, which plans to submit a report on its finding and recommendations to the Wisconsin State Legislative Council by mid-October.

Presented to the committee by Raymond Fey, president of the La Crosse and Eau Claire transit systems and operator of the mass transportation system in Winona, Minn., the industry program's main points were:

Cities should improve the regulation of traffic and parking; staggered hours of work by business and industrial groups should be worked out in communities with the cooperation of chambers of commerce; the state should exempt transit companies from fuel taxes; the state should eliminate registration fees for buses, and the state legislature should enact a new law to eliminate local taxes on transit systems.

Also, the state should change its laws so transportation companies can revise fares, schedules and routes without meeting long delays such as occur now when petitions are filed before the State Public Service Commission; and municipalities should be given legal power to contract with transit companies to help support routes which are not profitable.

The Wisconsin study committee also heard James G. Franey, chairman of the public transportation committee of the Eau Claire Chamber of Commerce, and Jack Delveau of the Oshkosh Chamber of Commerce, urge public education campaigns among employes of industry, retail stores and the general public to attract more riders for transit systems.

The question of subsidies for mass transit systems also is being considered by the study group. Its chairman, Charles Ahner, a member of the State Highway Commission, pointed out that some cities already were subsidizing transit lines and had representation on privately-owned transportation company boards.

In addition to the statewide study being conducted in Wisconsin, a special committee created by the Milwaukee Common Council is studying that city's mass transportation problem. The Milwaukee committee was warned by Mayor Zeidler that "if one more streetcar fare increase is granted, I'll have to make a strong recommendation for establishment of a municipal transport authority."

Under existing state enabling legislation, the first step toward establishment of a metropolitan transit authority in Milwaukee would be a referendum vote authorizing such action. The authority could then be appointed by the mayor and governor but could not take steps to acquire or operate a mass transportation system without approval of the city common council.

Mayor Zeidler urged the Milwaukee committee to report as soon as possible on whether the Transport Co., as it claims, pays more than its fair share of taxes; whether Milwaukee's transportation routes are laid out properly; whether local transit fares should be based on a flat ride basis or on the distance traveled, and what realistic fare schedule would be fair both to the company and the public. Now operating under temporary increases which went into effect May 16, the Transport Co. has proposals for higher fares pending before the State Public Service Commission.

Other new developments in the field of urban transit regulation and financing, as reported from state capitals and cities throughout the country, include the following:

CALIFORNIA: In granting a temporary increase in single fares from 10 to 12 cents, and token rates to four for 45 cents, to the Sacramento City Lines, the California Public Utilities Commission criticized the firm's failure to "develop and undertake an aggressive business promotional plan" to help itself out of its financial difficulties.

"The time has come," the commission asserted, "when the public interest requires that the company make a sincere and vigorous effort to better its earning position by attempting to attract more patronage to its services rather than to seek to do so entirely by raising the fares."

INDIANA: Complete cooperation with Mayor Alex M. Clark of Indianapolis in carrying out his suggestion for establishment of transit lanes on one-way streets to speed both transit and automobile traffic was promised by W. Marshall Dale, president of the Indianapolis Transit System.

It was noted that the plan is being advocated nationally by General Electric Co. as a means of reviving the ailing transit systems of major cities.

Expressing concern over the declining patronage of the Indianapolis transit system since it was recently paralyzed by a strike, Mayor Clark said he was considering asking the City Council to authorize the right-hand lanes of two Indianapolis thoroughfares exclusively for trolley and emergency vehicles. Dale said he would accept the mayor's invitation to discuss possible inauguration of the experiment.

"After reading of the mayor's plan," Dale said, "I called headquarters of General Electric and found that the idea is under discussion in several cities but that no steps have been taken yet to put it into operation. If Indianapolis does so it will be the first city to take this progressive action which will undoubtedly establish a pattern for the country."

KENTUCKY: In testifying in support of the Lexington Railway System's application for higher bus fares, A. Z. Looney, vice-president and general manager, told the State Motor Transportation Department that the number of the company's bus passengers had dropped since 1950 by about 25 per cent for adult riders and 22 per cent for children.

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The company sought permission to raise fares to 15 cents for adults and 10 cents for children from present fares of 13 cents a ride or three fares for 35 cents for adults and 5 cents for children.

MASSACHUSETTS: In a move to win back some of the riders it has lost to private automobiles in recent years, Greater Boston's Metropolitan Transit Authority has extended one of its rapid transit lines two and one-eighth miles out toward the North Shore. The extension includes three new stations and parking lots in Revere, where motorists may park all day and get a round-trip ticket to the city for 61 cents.

NEW YORK: In its annual capital budget request to the New York City Planning Commission, the City Transit Authority asked for $172,062,000 in capital funds for improvements next year on the publicly-owned subway and elevated lines. At the same time the authority outlined a $669,100,000 program for new transit equipment and facilities over the next six years.

Besides the proposed financial requirements for new heavy construction, the authority's plans provide for completion of projects already under way.

All but $40,000,000 of the funds sought for next year would be borrowed by the city through issuance of long-term bonds under a special $500,000,000 transit exemption from its constitutional debt. Before any of the new projects can be started, however, it will be necessary for the City Planning Commission and the Board of Estimate to authorize their inclusion in the city's 1955 capital budget.

In another development, the Regional Plan Association advocated the construction of a rapid transit tunnel under the Hudson River to connect New Jersey railroads with the New York City subway station at 14th Street.

Explaining that the plan has two basic purposes, the association said it would reverse the trend now favoring commuter transportation in motor vehicles and would protect the central core areas of the region from further destructive congestion.

C. McKim Norton, vice-president of the association, said the rail transit tube would cost only $40,000,000 exclusive of transfer station facilities in New Jersey or a short right-of-way that might have to be acquired. In contrast, he pointed out, a motor vehicle tunnel would cost at least $100,000,000.

In announcing that the plan had been forwarded to the bi-state Metropolitan Rapid Transit Commission and to the New York City Transit Authority, Norton suggested that either of those agencies or the Port of New York Authority might undertake the project. The Port Authority several months ago abandoned plans for a motor vehicle tunnel between 14th Street and Hoboken because it would cost $350,000,000.

NORTH CAROLINA: Permission for the Duke Power Co. to go out of the bus business in Salisbury, Spencer and East Spencer was recently granted by the State Utilities Commission in an order which also authorized Consolidated Bus Lines, Inc., of High Point, to take over the Duke system and provide bus service in the three communities.

Consolidated is headed by H. F. Moore, who also owns and operates the Suburban Bus Lines in the Greensboro area. Consolidated bought Duke's High Point bus system in May, 1953.

PENNSYLVANIA: State Public Utility Commission authorized the Philadelphia Suburban Transportation Co. (Red Arrow) to increase base cash trolley and bus fares from 15 to 18 cents and start use of a 16 2/3-cent token (three for 50 cents), effective July 16. No change was made in the 7½-cent school and children's fare, and free transfers will continue to be issued on cash fares only.

Red Arrow operates a coordinated trolley and bus service from the 69th Street Terminal, Upper Darby, to suburban areas in Delaware, Chester and Montgomery counties. High speed electric lines run to Strafford and Norristown.

Company officials said the increase, expected to produce an additional $368,000 annually, was needed to meet higher operating costs, particularly wages, in the face of a continued patronage loss.

TENNESSEE: Currently pending in Chancery Court in Memphis is an appeal by the Memphis Street Railway from the refusal of the city of Memphis to grant the company a fare increase from 12 to 15 cents.

Meanwhile, the Memphis Downtown Association received a report prepared by Leslie Williams, traffic and planning consultant of Philadelphia, recommending measures for the improvement of the Memphis mass transportation system.

The report included recommendations for deluxe express service over principal thoroughfares between the business section and outlying areas; increasing the speed of all transit vehicles to the fullest possible extent; maintaining a high standard of regular service; experimenting with special services, including those tied with park-ride arrangements and terminal parking areas; and continuing to modernize the

service with new and attractive vehicles of the latest type, ultimately with air conditioning.

"These objectives will cost money, and they depend upon a comprehensive and realistic fare structure," Williams said in his report to the association. "Fares must be tailored to length of ride and type of service, so that each rider will pay in proportion to the quantity and quality of the service he uses.

"This is essential to attract new riders from competitive forms of travel, hold the short-haul rider, and make available to each passenger the kind of service best suited to his individual need.

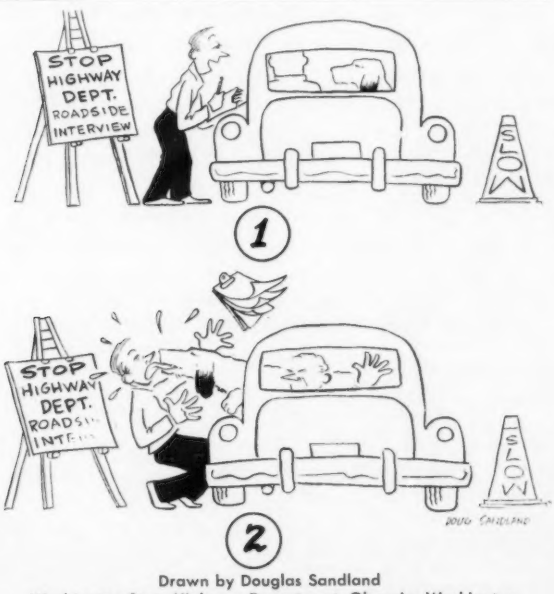
"Only in this way can transit effectively perform its important role in carrying increasing numbers of people to downtown. The Downtown Association should support a rationalized fare structure and relief from special taxes to permit the needed transit improvements."

TEXAS: An ordinance establishing a new zone fare system for Dallas Railway & Terminal Co. transit lines was adopted by the Dallas City Council, effective July 7.

Approximately 63 per cent of Dallas transit riders, those who do all of their riding within one of the three zones set up, will not be affected by the change. They will continue to pay the 15-cent cash or 14-cent token fare. For about 35 per cent of the riders, the zone fares mean an increase of from 3 to 10 cents. A few who ride all the way across the city will have to pay 30 to 35 cents for their trips, and a few will get a reduction in fares.

In establishing the new system, the Dallas City Council cut in half the gross receipts tax ($300,000 last year) the company has been paying the city, and required the company to cut in half the 7 per cent dividend it has been paying stockholders. The company will be required to put that money into a special fund to replace its remaining street cars with buses. The company plans to spend $2,500,000 in making the changeover.

WASHINGTON: In its biennial report on the Seattle transit system, the City Transit Commission warned that "the combination of increasing costs and declining patronage makes another fare adjustment necessary in the near future." *(Continued on page 37)*



Drawn by Douglas Sandland
Washington State Highway Department, Olympia, Washington

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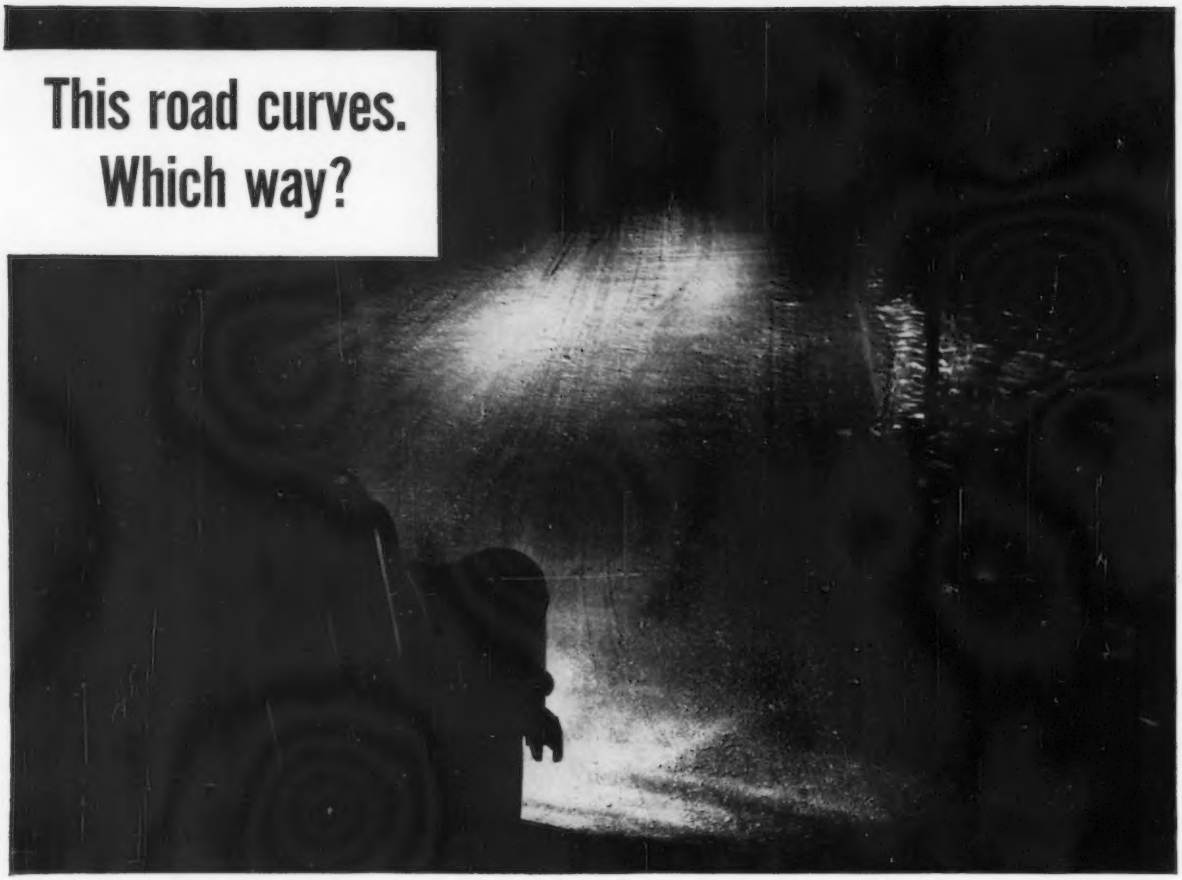

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TRAFFIC NEWS

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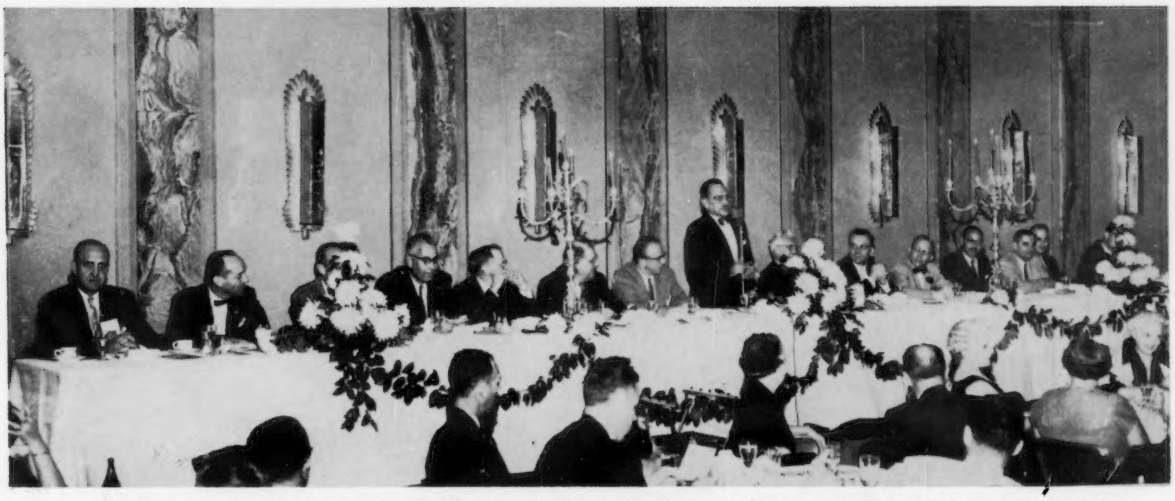

The diners were in a festive mood as ITE Missouri Valley Section President J. J. Feuchter (standing center) prepares to introduce national ITE President Porter. The full complement of the ITE Officers and Directors is shown. Left to Right: Local Arrangements Committee General Chairman Gerald H. Frieling; Executive Secretary Tim Todd; Secretary-Treasurer J. Carl McMonagle (obscured by flowers); Vice-President Theodore M. Matson; Vice-President Charles W. Prisk; Past-President Donald M. McNeil; President Harry Porter, Jr.; Mr. Feuchter; Dr. Alfred Haake, principal speaker; Edward G. Wetzel, Director—District 1; Robert S. Holmes, Director—District 2; Alger F. Malo, Director—District 3; Matthew C. Sielski, Director—District 4; Karl A. Bevins, Director—District 5; and Joseph E. Havenner, Director—District 6 (obscured by flowers).

By Edward A. Mueller, Junior Member, ITE
Yale Bureau of Highway Traffic

Kansas City, Missouri, was host to some 450 ITE members, wives, highway officials, and other guests for the 25th Annual Meeting of the Institute of Traffic Engineers, September 26th to September 30th. New style Technical Sessions, myriad social activities appealing to both members and wives, and the Annual Business Meeting of the ITE were held at the Hotel Muehlebach Headquarters. The Missouri Valley Section members were the official hosts and turned out a splendid job on this, the ITE's Silver Anniversary Meeting. (The 25th meeting of the Institute's 24 years of existence.)

Ladies' Doin's

Activities for the "better halves" started on Monday with a noon luncheon at the famed Wishbone Restaurant, featured by a style show and antique silver presentation, and continued with a shopping tour of the famous "Country Club Plaza," with a tea afterwards. In the evening the ladies vied with the men in being railroad operators in the role of

Kansas City Meeting in Brief . . .

The ITEers who did not attend the Silver Anniversary Meeting September 26 to 30th missed a memorable event which will be long remembered by the 450 in attendance, who enjoyed the many activities including—

The fine preparations and excellent arrangements made by the host Missouri Valley ITE Section . . .

The Kickoff Luncheon; joint ITE-Chamber of Commerce Luncheon and Technical Session; Biscuit Banter Breakfast with Auction and Beauty Contest; and the Annual Banquet enjoyed by the gourmets present . . .

The Belles Banter Breakfast; Luncheon with Style Show; unusual shopping activities and tour of Kansas City which kept the ladies busy . . .

The Annual Business Meeting featuring election of officers, adoption of a small dues increase, incorporation of ITE and year-end reports of current ITE affairs . . .

The new type Technical Sessions featuring round table panel discussion with audience participation rather than formally prepared papers . . .

The fellowship, oneness of spirit, and exchange of new and old ideas, so prevalent at all ITE meetings . . .

And lastly, the intricate railroad setup in Headquarters room whose switching problems convinced most would-be railroaders that even good traffic engineers are not passable switchmen, according to Joe Prismo standards. Basic error was failure to observe ICC Regulations Operating Rule No. 7 . . .

See what you missed - - - We'll be seeing you in Pittsburgh October 23-27, 1955.

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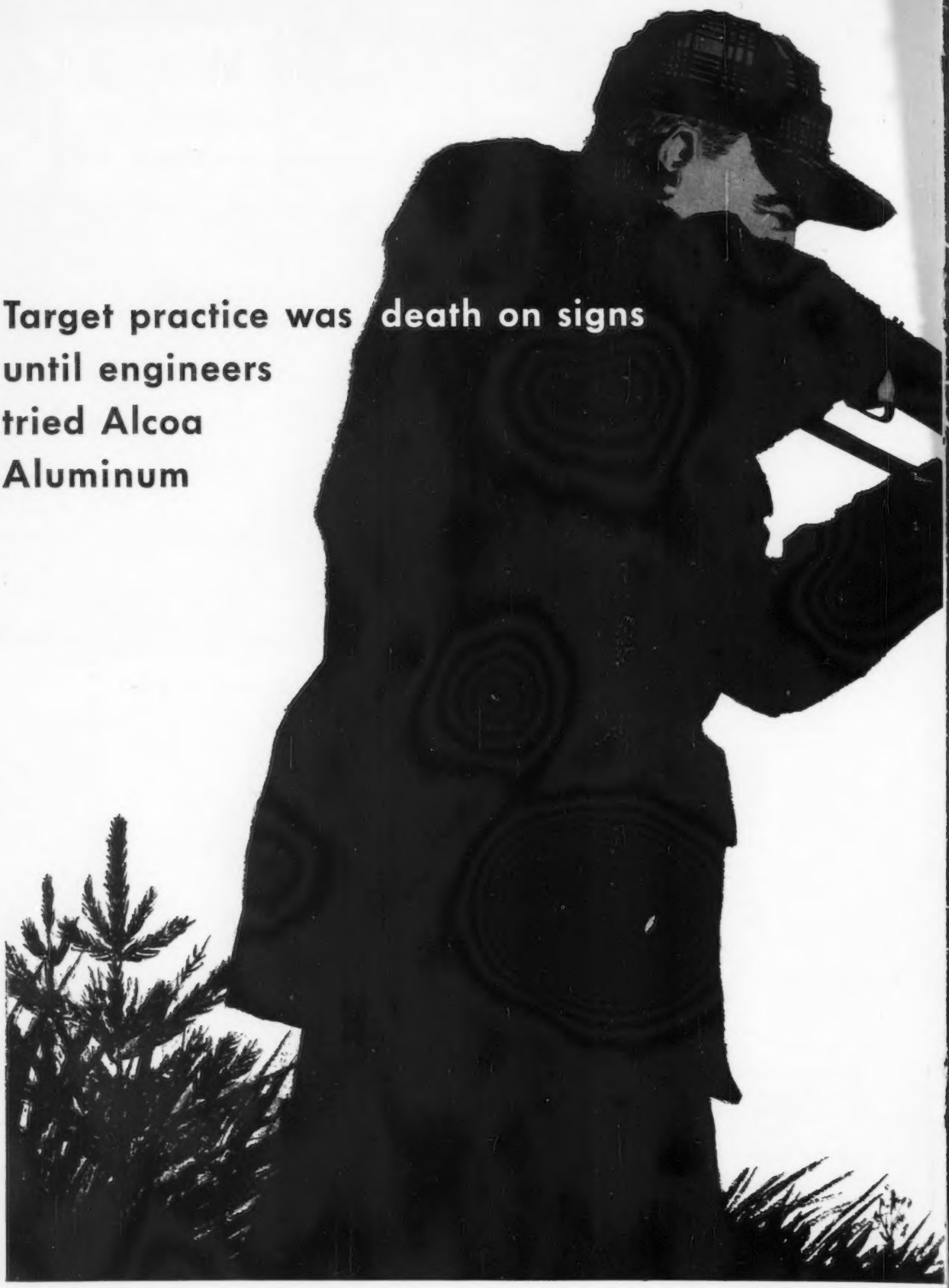

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Switchmen, on the "World's Most Intricate Miniature Railroad System Game" dubbed for this occasion, The Missouri Valley Railroad which had been set up in the Headquarters room. This game continued the focal point of entertainment interest throughout the Annual Meeting and proved rather conclusively that the girls, like traffic engineers, by and large, are not very good railroaders.

On Tuesday the girls not to be outdone by their masculine adherents, started with a "Biscuit Banter Breakfast" most aptly named "The Belles Breakfast," with Mrs. Lloyd White presenting her "philosophy of hats" in a clever, illustrative manner, the ladies getting into the act by making their own hats in a wide open competition for three top prizes. Winners were Mrs. Herman J. Hoose, Mrs. Jerome D. Franklin, and Mrs. Anthony Basile, who each were awarded $15 hats selected by Mrs. White.

A fifty-mile tour of Kansas City points of interest was undertaken by both sexes in the afternoon ending at the Saddle and Sirloin Club where a Chuck Wagon Dinner was served to all persons making the tour. Social Activities in the evening after returning to the hotel were centered in the Headquarters Room.

The gals rested up after Tuesday's strenuous activities by taking in a shopping tour of the many fine Kansas City stores and climaxed their day by attending the Annual Banquet held that evening.

Members' Activities

Around 200 conventioners registered Sunday, September 26th, although only the Board of Direction and several committees conducted formal meetings that day. Official activities started off with the Kick-Off Luncheon at noon Monday. Mr. L. P. Cookingham, City Manager of Kansas City, pinch-hitting for Mayor William E. Kemp, greeted the convention and welcomed the registrants to Kansas City. Mr. Cookingham was introduced by Mr. Gerald H. Frieling, Chairman of the Local Arrangements Committee.

The Annual Business Meeting at 2:00 P.M., Monday, September 27th featured the election of the following slate of officers for the coming year: Harry Porter, Jr.—President; Charles W. Prisk —re-elected Vice-President; Theodore M. Matson—Vice-President; and J. Carl McMonagle — Secretary-Treasurer. Directors elected for two-year terms were: Karl A. Bevins for District 5; Alger F. Malo for District 3; and Joseph E. Havenner re-elected for District 6.

Other important business was approval of putting to formal ballot an amendment of the By-Laws to provide a nominal dues increase, the incorporation of the ITE as a corporate body, and the various annual reports of the Officers and Executive Secretary, M. M. Todd, as well as the final report on membership given by Mr. Robert Holmes, Chairman of the Committee on New Members. Future issues will carry these reports and other Annual Meeting actions.

Technical Sessions

For the first time, this year's Technical Sessions featured round table discussion groups in conjunction with short papers presented by leading figures in traffic and business.

The first of the four Technical Sessions, each of which were presided over by ITE Past Presidents, commenced at 9:30 Tuesday morning with Nathan Cherniack as Chairman. Larry Smith, prominent Real Estate Consultant and President of Larry Smith & Company, Seattle, Washington, presented a paper entitled "The Traffic Problem Created by Automotive Shopping," discussing many of the traffic and terminal problems created by development of new suburban shopping centers. A capsule account of present-day parking facility design was given by George A. Devlin, Vice-President, National Garages, Inc., Detroit, Michigan. He showed that the trend is toward self parking type garages which provide lower operating costs. The next speaker, Lamar W. Gardner, Civil Engineer, Street and Parkway Design Division, Los Angeles, reviewed Freeway and Expressway designs and included examples of the application of traffic engineering data in facility design. The first Technical Session was closed with a presentation by Henry (Hank) A. Barnes, Director of Traffic, Baltimore, Maryland, on the public relations problem encountered by the traffic engineer. In stressing the need for press, radio, and TV promotion of traffic engineering improvements, Barnes noted that 75 per cent of his time is given to such duties.

Tuesday's luncheon included alumni of the Yale Bureau of Highway Traffic, ITE past-presidents and Local Section members as well as others. Gordon Gravelle, Transportation Engineer, Automotive Safety Foundation, presided at the luncheon as General Chairman of the Yale Bureau Alumni, being succeeded in office by James Hardy, Associate Traffic Engineer, Los Angeles, who was unanimously "railroaded" into office, to close the affair.

The Local Arrangements Executive Committee consisting of Chairman G. H. Frieling; Missouri Valley Section prexy, Joe J. Feuchter; L. W. Corder; G. J. Fisher; W. W. Rankin; and Kansas City Traffic Director, J. A. Hutter, most capably aided and abetted by A. J. Basile; O. J. Falin; R. E. Kuehl; G. C. Lichty and R. L. Meyer, in addition to providing excellent convention facilities and social activities, arranged an excellent tour for Wednesday afternoon. The pelting rain at the outset failed to dampen the spirits of the eight busloads of ITE'ers and their wives who were treated to an excellent tour of Kansas City including recent Freeway developments, the new Paseo Bridge over the Missouri; Swope Park, and many other scenic and interesting points. A Chuck Wagon dinner was served at an exclusive private club, The Saddle and Sirloin, being preceded by "beer and bandanas." A string orchestra brought nostalgic memories back to the 300 who were at the dinner by the playing of sentimental and favorite songs, and generated a songfest that lasted through the bus ride back to the hotel.

A miniature railroad set up especially for the ITE convention in the Headquarters Room along with the liquid refreshment available soon made railroad engineers, switchmen, and repairmen out of the many convention goers who attempted to solve the switching intricacies of the track layout.

Technical Session Number 2 held on Wednesday morning, September 29th, was divided into two parts: Rural and Urban traffic problems. Much interest was manifest in the Urban Session where Robert A. Mitchell, Traffic Engineer, Wilmington, Delaware, presided. Burton Marsh, Director, Traffic Engineer and Safety Department, American Automobile Association led the opening discussion of the Operations division which centered around parking, signal, sign, one-way and traffic survey problems encountered in urban areas. George W. Howie, Traffic Engineer, Cincinnati, Ohio, showed slides of unusual signal installations and use of the pentagon shaped sign for pedestrian protection. Charles Murphy, Director, Department of Traffic Engineering, Automobile Club

of New York, presented a quick method of ascertaining financial feasibility of acquiring property for parking in small cities and Ross Shoaf, City Traffic Engineer of San Francisco, cited some traffic survey applications. There was lively participation in the discussion of these and other contributions.

In the Planning Section of the Urban Traffic Problems, discussion led by D. Grant Mickle, Director, Traffic Engineering Division, Automotive Safety Foundation, centered around state-city relationships, aids to transit including special routings and exclusive street use, freeway traffic controls, and the need for more legislative power to install regulatory devices as traffic aids.

Luncheon Wednesday noon was a joint affair with the Kansas City Chamber of Commerce. Mr. Robert L. Sweet, Vice-President of the Kansas City Chamber of Commerce, presided and introduced ITE guests and chamber affiliates as well as the luncheon speaker, C. G. Nichols, President and General Manager of the G. M. McKelvy Company, Youngstown, Ohio. Mr. Nichols handed down a ringing challenge to traffic engineers by advocating "300 Horsepower Planning" for tomorrow's traffic. The afternoon Technical Session (Number Three) served to emphasize this theme and enlarge upon it.

The third Technical Session presided over by Leslie J. Sorenson, Traffic Engineer, Chicago, Illinois, featured a panel composed of James N. Kemper, Chairman of the Board, Commerce Trust Company, and President of Downtown Redevelopment Corporation, Kansas City; J. A. Hutter, Traffic Director, Kansas City; Harold F. Hammond, Manager, Transportation and Communications Department, Chamber of Commerce of the United States; and Wilbur S. Smith, Consulting Engineer, Wilbur Smith and Associates, New Haven. These men spoke of the relationships and duties of Traffic Engineers and businessmen in meeting traffic problems of cities.

The panel topics and ensuing discussion from the assembly developed the following principal conclusions:

Use a factual and objective approach in traffic studies.

All agreed that business and traffic engineers because of their mutual desires are getting along better than was the case formerly.

Wednesday's social activities started at 6:00 P.M. with a cocktail party generously furnished by "Peddlers Anonymous," which were the attending representatives of the various manufacturers and distributors of traffic products.

The Annual Banquet in the Grand Ballroom, which followed, featured the introduction of the elected officers and a dynamic presentation of "Engineers versus Bungaleers" by Dr. Alfred P. Haake, a noted professor of Economics who is a consultant to General Motors. Missouri Valley Section President, Joe Feuchter, introduced the newly-elected officers and President Harry Porter, Jr., presented the past-president's Certificate to Don McNeil. Dancing was provided during the banquet and after by the music of Johnny Coon, who is the son of the Coon that played in the Coon Saunders Black Hawk Orchestra famous during the Roaring Twenties, so well remembered by many old-timers.

Technical Session Number Four, divided into two sections wound up convention activity Thursday morning. Committee reports featured these split sections.

Lewis McIntyre, Consulting Engineer, Pittsburgh, Pennsylvania, and Thomas Seburn, Yale Bureau of Highway Traffic, presided over these sessions. Seburn's period included committee reports of Equipment Design, Planning and Geometric Design of Traffic and Pedestrian Ways and Planning and Geometric Design of Terminal Facilities discussions. McIntyre's session included Traffic Engineering Administration, Professional Standards and Education and Traffic Control Operations. Those introduced by Technical Department heads Lloyd M. Braff, Alger F. Malo and Joseph Havenner, and presenting reports were: J. Al Head, Ellis L. Mathes, D. L. Gerlough, R. F. Michel, Allan R. Bender, Lou Bender, Max Halsey, Norman Kennedy, Don Berry, Fred Hurd and Phil Mancini. Several other chairmen reported informally.

- The best use of what is available must be made.
- Use traffic engineering techniques such as one-way streets. It has been proven that they do not hurt business.
- Transit could be aided by tax relief.
- Establish a master plan and follow it.
- Stand behind expressway and parking programs.

Reprise

It would not be well to conclude this brief account of the Silver Anniversary ITE meeting without looking back 24 years to the time when 19 pioneers banded together at Pittsburgh and founded the Institute. The past twenty-four years have seen many changes in traffic but the position and influence of the Institute and the profession of Traffic Engineering is due only to the unselfish motives and vision of the founders and the perseverance and courage of the members through the years in carrying out the founder's dreams. May the Golden Anniversary of the ITE see as much accomplished as in the past 24 years.

Next month we hope to run several of the many Kansas City Meeting pictures taken by Henry A. (Hank) Barnes, 'official' ITE photographer. —Editor

Statement Required by the Act of August 24, 1912, as Amended by the Acts of March 3, 1933, and July 2, 1946 (Title 39, United States Code, Section 233) showing the Ownership, Management, and Circulation of Traffic Engineering, published monthly at Plainfield, New Jersey.

1. The names and addresses of the publisher, editor, managing editor, and business managers are:

Publisher—Institute of Traffic Engineers, Inc., Strathcona Hall, New Haven, Conn.

Editor—M. Mansfield Todd, Strathcona Hall, New Haven, Conn.

Managing editor—None.

Business manager—None.

2. The owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding 1 per cent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a partnership or other unincorporated firm, its name and address, as well as that of each individual member, must be given.)

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3. The known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.) None.

4. Paragraphs 2 and 3 include, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting; also the statements in the two paragraphs show the affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner.

5. The average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the 12 months preceding the date shown above was: (This information is required from daily, weekly, semi-weekly, and triweekly newspapers only.)

OSMUN FORT,
Publisher.

Sworn to and subscribed before me this 27th day of September, 1954.

WILLIAM L. CHRISTIAN,
[Seal] Notary Public of N. J.
(My commission expires April 1st, 1958)

Lincoln Tunnel Users To Have Parking

Aerial view showing the new 800-car, ten-acre Lincoln Tunnel Parking Area in North Bergen, New Jersey, established by the Port of New York Authority to relieve tunnel traffic and expedite commuter travel. The parking area will be maintained and operated beginning in the Spring of 1955 by the Public Service Coordinated Transport of Newark, New Jersey, which will provide six-minute rush hour tunnel bus service from the area to the Port Authority Bus Terminal in Manhattan. During the day, buses will be scheduled every ten minutes and at night every fifteen minutes. The parking lot fee will be fifty cents per car; bus fare twenty-five cents per passenger. The Port Authority will improve the area at a cost of about $400,000.

The establishment of an 800-car 10-acre Lincoln Tunnel Parking Area in North Bergen, New Jersey, to be operated beginning in the spring of 1955 by the Public Service Coordinated Transport of Newark, New Jersey, in conjunction with a tunnel bus service, was announced September 15th by Howard S. Cullman, Chairman of The Port of New York Authority. A part of the Lincoln Tunnel property, the parking area lies north of Route 3 and west of Tonnelle Avenue, partly beneath the tunnel viaduct.

The Lincoln Tunnel facility is the first peripheral area, combined with bus service, to be provided as a part of a major vehicular crossing in the New York - New Jersey metropolitan area. It will expedite commuter travel by relieving Lincoln Tunnel congestion during the peak traffic hours in the morning and evening. At the same time, it will relieve commuters of the burden of handling their vehicles on the congested city streets and in crowded parking space in Manhattan.

"The Lincoln Tunnel Parking Area represents an opportunity for relief of traffic congestion which traffic experts have recommended for metropolitan areas throughout the country. It is being undertaken jointly by the Port Authority and the Public Service company as a result of official and civic recommendations," Chairman Cullman stated.

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If you are concerned with parking control in your community, these results of a nation-wide survey just completed must surely interest you. This survey was made by mail among all known users of the Traf-O-Teria System. More than 50% of these users replied. Here is a summary of their answers:

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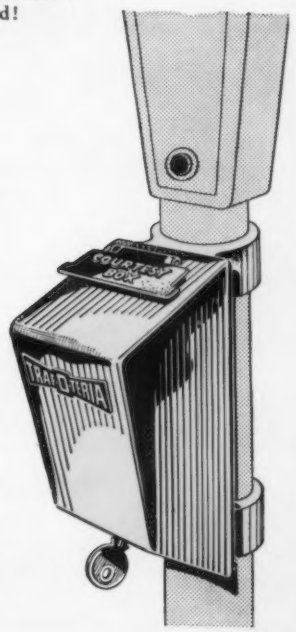

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INSTITUTE OF TRAFFIC ENGINEERS

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"The Governor's Committee on New York - New Jersey Tunnel Traffic, in which Governor Robert B. Meyner of New Jersey has taken an active interest, has been particularly concerned with searching for traffic relief measures such as that now to be provided by the Lincoln Tunnel parking facility. Both Governor Meyner personally and the Committee have endorsed the project," he continued.

"Last April Governor Meyner, in a public statement, declared that a partial solution to interstate tunnel traffic congestion might be the construction of a parking lot in New Jersey adjacent to the tunnel approaches. The Port Authority at that time assured him that the possibility of peripheral parking facilities was being studied in connection with the joint vehicular traffic survey under way by the Port Authority and the Triborough Bridge and Tunnel Authority.

"The Commissioners and Staff of the Port Authority have felt that, in carrying out the legislative policy of the States of New Jersey and New York, full use should be made of Lincoln Tunnel property for the public benefit. The establishment of this holding area for cars which otherwise would pass through the tunnel, will, we believe, greatly relieve the existing peak-hour commuting traffic both in the tunnel and at its approaches.

"We are most appreciative of the cooperation of the Public Service company, and particularly Mr. James M. Symington, its Vice-President of Operations, for undertaking to operate and maintain the area and provide tunnel buses from the parked cars to the Port Authority Bus Terminal."

The parking area is meant to relieve the commuter rush-hour congestion in the Lincoln Tunnel from 8 to 9 in the morning when about 2,100 vehicles move from New Jersey to New York, and from 5 to 6 in the evening when about the same number return from New York to New Jersey.

A tentative Public Service schedule indicates that rush-hour bus service will be available at six-minute intervals, both morning and evening. During the intervening daytime hours the tunnel buses are expected to run on a ten-minute schedule. For the convenience of night-time patrons of the Parking Area, a fifteen-minute schedule will be maintained.

The Port Authority will improve the property at a cost of about $400,000. It will provide paving, drainage, lighting, fencing, access ramps and bus shelters. The eastbound motorists to New York will enter the parking area by way of an access roadway from Paterson Plank Road and Route 3. Cars leaving the parking area for points in New Jersey will go directly by way of Route 3 or Paterson Plank Road.

It is expected that the charge for parking a passenger car at the Lincoln Tunnel will be 50 cents a day. This compares with a parking charge range of from 75 cents to $3.00 in Manhattan. The bus fare will be 25 cents per passenger for a one-way trip between the area and the Port Authority Bus Terminal.

All revenues from parking charges and bus fares will be collected by Public Service. Revenues remaining after the company's costs are met will be paid to the Port Authority until the Port Authority developmental costs have been recovered. After both the Port Authority and Public Service have recovered their improvement costs, Public Service will pay to the Port Authority one-half of the revenues. The project, considered marginal financially, is expected to become self-supporting if motorists use it to the anticipated extent.

Better Roads — Better Business

WASHINGTON—What have good roads got to do with the price of beef? Quite a bit, according to the Chamber of Commerce of the United States.

Fifty years ago, most cattle, as well as other livestock, made a part of their journey to market on the hoof with a considerable loss of weight. Today, thousands of head of beef cattle are trucked to market over the highways. That saves a lot of weight loss, but there is still a premium on time.

For example, a cattle farmer expects a 33-pound loss in weight of a 1,000-pound steer in the first 100 miles of travel. Even a three-hour extension in trip time will knock another six pounds off his steer. Thus at 15 cents a pound, any time saved by better highways, would be worth 30 cents an hour per animal.

Obviously, the Chamber notes, good farm to market roads have a definite effect on the price of beef.

Actually, good roads mean good business in general.

That is why the Chamber expects to provide President Eisenhower and the state governors late this year with comprehensive recommendations for street and highway improvements throughout the nation, in line with the President's proposal for a $50 billion, highway program.

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$15,000 Scholarship Program Set Up By ICS

Sixty-four complete scholarships valued at more than $15,000 will be awarded by the International Correspondence Schools, Scranton, Pa., to persons unable to attend college, it was announced in August by Lawrence W. Tice, president.

The awards, to be made in 1954, will go to young men and women in the U. S. and Canada on an equitable, geographical basis. These are independent of, and in addition to, other scholarships now offered by the world's oldest and largest home-study school.

While many of the subjects included in the ICS curriculum are of college level, only those persons who do not plan to attend college will be considered as candidates.

Local non-sectarian, non-political organizations will be authorized by ICS to select candidates for the scholarships in their areas. Groups desiring to serve as Selection Committees must agree to make arrangements to review all eligible candidates. Only these committees will be empowered to nominate candidates.

Further information and rules of eligibility for sponsoring organizations and scholarship candidates may be obtained from John C. Villaume, Dean of the Faculty.

One-Way Plan Eases Traffic, Survey Shows

Accidents Drop, Business Rises In 134 Cities

Increasing use of one-way streets is going far toward easing downtown traffic jams, reducing accidents and boosting business, the National Chamber reported on the basis of a 134-community survey.

While merchants usually are skeptical at the time a one-way plan is first proposed, only nine of the 134 communities returned a part or all of their one-way streets to two-way use, the survey shows. After a trial period, business men generally agree that the advantages of one-way streets in congested areas outweigh the disadvantages.

SPEEDUP NOTED

Most of the communities studied showed a sharp increase in the volume and speed of traffic when two-way streets were converted to one-way use, while both pedestrian and vehicular accidents were reduced.

Sacramento, California, reported a 35 per cent increase in traffic volumes, a 62 per cent reduction in pedestrian accidents and a 23 per cent cut in accident frequency, after establishing one-way streets in the central area. New York City reduced average motor vehicle running time 33 per cent on First and Second avenues by making these arteries one-way.

Entitled "One-Way Business Streets," the study is intended to help business men and city officials who are considering conversion of downtown streets to one-way use. It provides concise information on effects of one-way streets on retail sales, property values and traffic control and outlines the steps necessary for success of a one-way plan.

The booklet is available at the Transportation and Communication Department of the National Chamber, 1615 H Street, N. W., Washington 6, D. C. Single copies are free, additional copies, 25 cents.

SIGN SAVES KILLDEER FAMILY

BUSY AIRPORT HATCHES "NO PARKING" PLAN FOR PLANES; BIRD'S O.K.

● It's hard to say why this mother Killdeer chose to build her nest on the busy Wold-Chamberlain ramp for parking airliners, in Minneapolis. But tender-hearted ground crewmen quickly installed a NO PARKING sign to make the area safe (though prop blasts ruffle her feathers at times). . . .

While not the express purpose of our NO PARKING signs, this example shows how obedience to them is assured wherever they are put to work.

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Minneapolis Star Photo

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General Clay Named To Head President's Special Highway Advisory Committee

Gen. Lucius D. Clay (U.S.A., ret.) was appointed August 30th chairman of a special advisory committee to help solve state-Federal problems connected with putting into effect President Eisenhower's proposal calling for expenditure of an additional $50 billion for highway improvements over a ten-year period.

The appointment was announced by the President following a breakfast session at the White House.

A White House spokesman announced that the special committee would be composed of five or six members, drawn from such groups as "organized labor, banking and the construction fields." It was not indicated when the full committee membership will be appointed. The resources of the Bureau of the Budget and the Bureau of Public Roads will be placed at the disposal of the committee, which will report back to the President before the next session of Congress.

(Continued on page 34)

WALK ON THE GREEN—Mayor Russell Hileman of Michigan City, Indiana, watches as Bill Weber rolls a coat of Sav-A-Child Green paint on crosswalk at downtown intersection. Captain Lloyd Storey of the Traffic Department directs the operation.

New Street Marking System Controls Pedestrian Traffic

By Lloyd H. Storey, Captain
Traffic Department
Michigan City, Indiana

Every summer Michigan City faces a population jump of nearly 100%. A normal manufacturing town becomes a lakeside resort. City dwellers from Chicago, vacationers from Michigan, Illinois and Indiana and week-end transients jump the normal population from 40,000 to about 80,000 people. The result is confusion and sometimes chaos in the downtown shopping area.

Like most normal people the vacationers tend to live a little faster and have less regard for the rules and regulations of the people around them. They put more zip into their driving downtown, jack-rabbit away from stop lights with more intensity, and seem to have a running race with pedestrians trying to cross the street.

Once the cars are parked, many people take the philosophy "Let's get there fustest with the mostest." Jaywalking, crossing against lights or trying to make a right or left hand turn in front of the pedestrians becomes the rule rather than the exception.

Mayor Russell Hileman and myself working on the problem over the years have developed steps to control both mobile and foot traffic. Controlled speeding zones and well-placed stop lights have slowed down the motorists. There just aren't enough hands or feet to stop every pedestrian. We have used most of the familiar devices, including the Walk - Wait signals, Sound truck system, and warning tickets.

This year we seemed to have found an unusual and simple system which creates an impression upon the pedestrian and motorist alike.

The mayor first explained his idea to me last spring. Together we reviewed our present pedestrian traffic control. We had the stop lights at every intersection in the downtown area. We had recently installed a new Walk - Wait system using the green Walk sign and a red Wait sign. The Walk flashed long enough to allow people at either corner to cross and then the wait came on allowing motorists to make either a right or left hand turn. However, people continued to disregard the Wait and attempted to make a crossing after it flashed red. We still needed a better system to control pedestrian traffic.

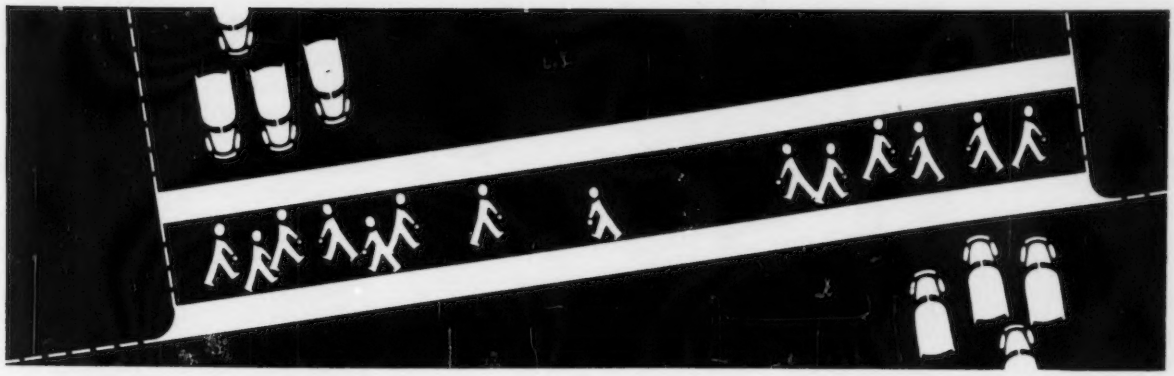
At most intersections throughout the country safety zones are defined by two white stripes usually about 8 feet apart running the length of the street. A person crossing is supposed to use only these areas at every corner. The motorist is supposed to keep the nose of his car out of this area when he stops for the light. We have never found it works too successfully in each instance.

Along with the green light, green Walk signal system the mayor had his idea. Why not paint the entire area between the two white lines a solid bright green and create a tangible, visible island of safety for the pedestrian? Combined with the oft - used slogan "Walk On the Green," it would really make the idea of traffic safety meaningful. It would tie the whole idea from the green light right down to the green crosswalk together. "Walk On the Green—walk on the green light—walk on the green Walk signal—walk on the green crosswalk."

I felt it was at least worth an experiment.

We inquired locally and at the State Highway Department but discovered there was no such traffic paint made. The standard colors in traffic paint are white and yellow. A green paint meant a special item. The longer we thought about the idea the better it became, so Mayor Hileman contacted the Traffic Paint Division of the O'Brien Corporation in South Bend, Indiana, to ask their opinion and help on our problem. They responded by telling us what we already knew—that no green traffic paint had ever been made.

We asked if an experimental batch, enough to cover the crosswalks at one intersection, could be made up. O'Brien officials decided they would go along with us and produced 20 gallons of a dark green, rubberized traffic paint. It had the qualities of most of the traffic paints currently in use—it dried in five



VEON*

the instant-drying, lasting line...
eliminates all cross-walk problems

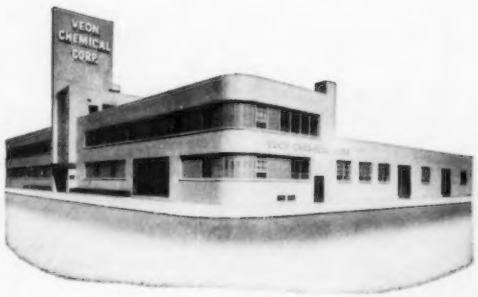
VEON ushers in a new era. VEON is the only new and permanent cross-walk development in the past two decades. VEON makes obsolete . . . paints, buttons, discs and slabs. Cross-walk lines of ready-prepared VEON compound dry instantly, never smudge, retain their clear, brilliant color (white, yellow or red) and outlast paint by at least 5-to-1! Yet VEON is applied as easily as ordinary paint by a single operator.

Test VEON on your busiest intersection — get instant and lasting proof that VEON cross-walks will help your traffic flow . . . will allow immediate traffic passage . . . and will cut your mounting manpower and maintenance costs.

VEON is available through your regular distribution sources.

*TRADE MARK

VEON CHEMICAL CORPORATION
22-09 Bridge Plaza North, Long Island City 1, N. Y.



minutes, could be applied with either a roller or a brush, and lasted from three to six months depending upon the amount of traffic.

On March 16, 1954, we put down this batch at the intersection of 8th and Franklin Streets, the busiest corner in Michigan City. The reaction was spontaneous and slightly amazing. Over the first three-day period 98% of all the people using the four crosswalks walked only on the green "Walk" signal. Prior to this only about 60% to 75% had regarded the light. Not one motorist stopped with his wheels or the nose of his car in the pedestrian area. Whenever a car overran the crosswalk he would immediately back off. As far as we could observe only three people were seen jaywalking in the blocks adjacent to the experimental intersection. Speed checks showed that motorists coming into this intersection slowed down perceptively about a half block from where they could see the green safety zones. "Walk On the Green" had become an instant success.

Newspaper, radio and municipal interest also ran high. In the space of a few days the Michigan City News-Dispatch ran three different stories including four photographs. The First Federal Savings and Loan Association of Michigan City completely to our surprise published an unsolicited paid advertisement a quarter page in size in the local paper. It showed a picture of the mayor and myself along with our crew applying the paint and had this headline: "We Like the New Green Safety Lanes at 8th and Franklin." They went on to praise our work in making the idea a reality and the work of the O'Brien Corporation in developing the product. Mayor Hileman also received many phone calls from school and P.T.A. officials as well as from municipal officials in nearby cities.

After observation of the idea in operation both the O'Brien Corporation and ourselves were interested in the product itself. We concluded after a month that improvements would have to be made. We were not satisfied with the color and O'Brien wanted to try some additional experiments using reflectors in the paint for night driving.

O'Brien concluded experiments in May and another application was made May 16, both at the downtown intersection and on the crosswalks around the Central Elementary School, the largest school in Michigan City. This school application was made at the request of Mrs. Harvey Rhoda, president of the Michigan City P.T.A. Council. This group felt that "Walk On the Green" would be of great benefit to the school children coming to and leaving school.

Again the response to this new experiment was immediate. The new paint had a more bright, nearly luminous color. Flanked by the white striped lines, it could be seen a block away. It didn't darken from wear as quickly and it cleaned up after a rain storm or a simple street brushing. The experiments with the beads in the paint proved unsuccessful and we abandoned this idea. The beads cut down the wear and also caused the paint to darken in a hurry. However, we were satisfied with the other product and it did a job both in the daytime and at night. It was called "Sav-A-Child Green."

Satisfied now with the idea and with the product we made applications at various spots throughout Michigan City. The first place on our list was the resort area—Washington Park. All crosswalks at intersections, from one area to another in the park, and at entrances and exits were painted green. We also had 12″ x 24″ metal signs stamped out using the final color and stating "Walk On the Green." These telephone pole signs were installed at all crosswalks.

Meanwhile, the experiment at the Central School showed it could aid the safety of school children. I talked with Mrs. Rhoda and her comment was: "After sitting in my car day by day watching the students, my reaction is that this idea will save the lives of children—if not in Michigan City, then somewhere in the United States. We are thrilled with the results of the test and feel that every city and P.T.A. should look into this project. It is a wonderful safety idea in protecting our children. The Michigan City P.T.A. council feels this is a very wonderful thing to have painted on every cross-walk leading to schools. It has proven successful in our town."

At downtown intersections, in amusements areas and at school crossings, the "Walk On the Green" idea has been a tremendous success in Michigan City. In my experience no other safety project has gained as much attention or comment. This idea can be of value to children and grown people as well. After seeing this in operation, I know that "Walk On the Green" is the only way to establish crosswalks in a manner that will continue to protect the pedestrian.

Plastix Reflective Markers

A fast, economical, and practical way of applying safety markings to highways, streets, parking areas, railroad and industrial areas, etc., has been developed by the Prismo Safety Corporation of Huntingdon, Penna.

The main ingredient of such safety markings is a plastic disc or strip called Plastix. This Plastix is impregnated with thousands of optical glass beads which impart a remarkable reflectivity to any markings of these Plastix discs so they can be seen night or day, in any kind of weather!

Simplicity and speed are keynotes to the application of these economical markings. To apply, simply apply an adhesive to the Plastix, apply adhesive to the pavement, press Plastix into place, roll down and traffic is ready to roll—the entire operation in a matter of minutes. When Plastix markings are used, long and frequent traffic tie-ups are eliminated. No road crew or costly equipment is necessary to apply or maintain Prismo Plastix markings.

For more complete details, write for your free copy of the Prismo Plastix Bulletin No. PX-35.

GENERAL CLAY NAMED TO HEAD COMMITTEE

(Continued from page 31)

The committee members, including General Clay, will serve without pay, the spokesman said.

The committee will work closely with the special Governors' Conference committee, which also is making a survey in regard to the President's proposal, and will study such problems as gasoline taxation and financing within the states, the spokesman added.

General Clay, under whose orders the famous Berlin air lift was carried out, is now Chairman of the Board of the Continental Can Company.

Portable Masonry Hole Cutting Machine

Entirely new—masonry hole cutting machine, portable, high speed, light weight, results of three years of research and experimenting by the Molco Drilling Machines Corp., 1100 20th St., N. W., Washington, D. C., uses a self-

sharpening diamond drilling bit to cut holes ½″ to 10″ in diameter through hard aggregate, including any steel reinforced building material, to a depth of 18″ (deeper holes may be drilled by placing an extension shaft on the bit). Drilling time of a six inch diameter hole in one foot of concrete is less than two minutes. Now available in two models, 1 hp. and 2 hp. Weight: approximately 275 lbs.

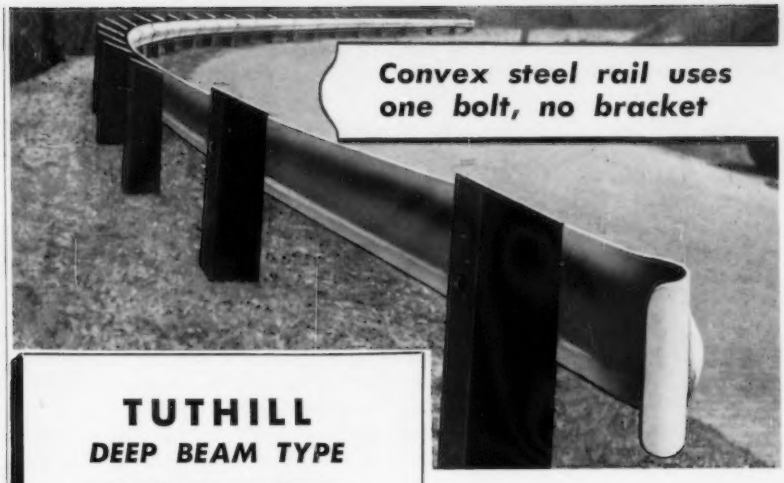
New Literature Released by Cataphote

New catalog literature on CATALINE PREMIX COMPOUND and CATALINE BEADS-ON-PAINT COMBINATION (Drop-On) has just been released by the Cataphote Corporation, Toledo 10, Ohio.

This literature is fully descriptive of the traffic paints offered by the company and includes such information as application data, drying time, units of sale, and prices per gallon.

The sheet on CATALINE PREMIX COMPOUND includes a full page of information including preparation, operating tips, and shutting down of application equipment.

The company offers this literature without charge to street and highway personnel. Write to the company at 958 Wall Street, Toledo 10, Ohio.



TUTHILL
DEEP BEAM TYPE
GUARD RAIL
cushions shock . . .
deflects cars safely

TUTHILL deep beam construction transmits impact to guard post, deflects and protects vehicle and occupants. Convex rail, secured to post with a single bolt, meets "deep beam" specifications . . . costs less to install, cuts maintenance. TUTHILL'S convex curve also gives highest visibility in darkness, rain or fog.

TUTHILL SPRING CO.

WRITE TODAY for complete brochure

760 WEST POLK STREET • CHICAGO 7, ILLINOIS

New Line Marker Announced

Industrial Products Company announces a new, low priced traffic liner for marking lanes in plants, loading platforms, parking areas, storage rooms, etc.

Operates on a spreader principle, no brushes, sprays or power—nothing to get out of order.

Applies to any firm surface. Works close to piled material or other projections. Uses any kind of "zone" paint.

After use, spreader should be submerged in kerosene where it is automatically cleaned and kept ready for instant use.

Spreaders are available for marking line widths of 1″, 2″, 3″ and 4″.

Comes complete with one spreader at $69.00. Additional spreaders $15.00 each.

Full information may be obtained by writing to Industrial Products Company, 2944 N. Fourth Street, Philadelphia 33, Pa.

When You Change Your Address

. . . please notify us promptly. Your copies of "Traffic Engineering" will then reach you without delay and without interruption.—Traffic Engineering Magazine, Strathcona Hall, New Haven 11, Conn.

Letters to the Editor

Sir:

In several recent issues of TRAFFIC ENGINEERING, I have noticed advertisements for a deposit box for attachment to parking meter posts to receive parking violation fines. These ads state how easy it is to collect fines for the municipality involved. This may be a desirable feature. The ad also points out how easy it is for the motorist who has violated a parking meter limit, to pay the fine without appearing at the Police Station and with practically no inconvenience. This may be good from the motorist's point of view, but it is certainly not good from the point of view of those who try to enforce traffic regulations in an effort to reduce violations.

My purpose in writing to you is to raise the question regarding the policy of the Institute of Traffic Engineers in carrying an ad which, to a large degree, may be in direct conflict with our ideals of traffic control and enforcement. Would it not be true that the easier it is to pay a fine, the more prevalent a parker would be to not care if he overparks? Is it not inconvenience and fear of embarrassment as well as the dollar value of a fine which tends to encourage motorists to obey regulations?

Please note that these views are my own personal opinion.

H. JACK LEONARD

Shrewsbury, N. J.
July 6, 1954.

In reply to Associate Member Leonard the editor cited the the action of the ITE Board of Direction taken June 11-12, 1953, reading:

July 22, 1954.

By motion, the Board adopted the statement, "publication of advertising does not constitute Institute approval or endorsement of the products or services advertised", to be carried in future issues of TRAFFIC ENGINEERING magazine, and the Editor may accept any and all advertising of new and unstandardized products provided that no false or misleading material appears in such advertising. It is the opinion of this Board that an advertisement in TRAFFIC ENGINEERING does not necessarily imply endorsement of the products.

Sir:

I have your letter of July 22nd regarding my objections to the advertising of products in TRAFFIC ENGINEERING, which are not in accord with good traffic practice. I have no objections whatever to your publication of my letter, if such publication will provoke additional thought and correspondence on the matter.

I also know, as you have pointed out in your letter, that the carrying of an advertisement in TRAFFIC ENGINEERING, does not necessarily imply an indorsement of the product by I.T.E. In effect, I am complaining about this basic principle. By this policy, while it might be good for TRAFFIC ENGINEERING, are we not at the same time making more difficult work for our own members by advertising the use of some item not in keeping with good traffic practice?

Perhaps I stand somewhat alone in this theory, in view of the fact that the Board of Direction has approved the acceptance of advertising of this nature.

Publication of my letter might bring forth other comments, and you are authorized to change the wording as necessary, to delete the direct identification of any products.

H. JACK LEONARD

Shrewsbury, N, J.
July 26, 1954.

Membership Applications

The following applications have been received since the list of applicants published last month.

APPLICATIONS FOR TRANSFER

BARTON, Eugene A.
Traffic Engineer
The H. K. Ferguson Company
Ferguson Building
11th and Walnut Streets
Cleveland 14, Ohio
September 3, 1954 for MEMBER Grade

COMISKEY, John Howard, Jr.
Traffic Engineer II
Bureau of Traffic Engineering
Room 1004, City Hall Annex
Philadelphia, Pennsylvania
September 13, 1954 for ASSOCIATE Grade

CZIZEK, Jay A.
City Traffic Engineer
14th and Washington Streets
Oakland 12, California
August 30, 1954 for MEMBER grade

LEE, J. Duval
Traffic and Planning Engineer
City Hall
Lynchburg, Virginia
September 7, 1954 for ASSOCIATE grade

MILLER, William J., Jr.
Traffic and Planning Engineer
Delaware State Highway Department
Dover, Delaware
September 3, 1954 for MEMBER grade

SIMOFF, Abram
Traffic Engineer
City Hall
East Orange, New Jersey
September 14, 1954 for ASSOCIATE grade

STANFORD, Malcolm R.
Associate Civil Engineer
Los Angeles County Road Department
Los Angeles, California
August 23, 1954 for ASSOCIATE grade

YOUNG, Thomas Eldridge
Assistant Engineer—Traffic
Division of Traffic Engineering
417 Lincoln Park Drive
Cincinnati 3, Ohio
September 3, 1954 for ASSOCIATE grade

NEW APPLICATIONS

ALBRIGHT, William D.
Accident Analysis Engineer
Oregon State Highway Department
Salem, Oregon
August 25, 1954 for JUNIOR grade

BOX, Paul C.
Street Lighting Engineer
Traffic Department
Kansas City, Missouri
August 27, 1954 for ASSOCIATE grade

BROWN, Richard E.
Junior Traffic Engineer
Traffic Engineering Division
417 Lincoln Park Drive
Cincinnati, Ohio
September 3, 1954 for JUNIOR grade

BUXTON, Charles Franklin
Assistant Traffic Engineer
1370 Krameria Street
Denver 20, Colorado
September 7, 1954 for MEMBER grade

CLEARWATER, Louis Laird
Assistant Highway Engineer
Division of Highways
4075 Taylor Street
San Diego, California
August 27, 1954 for JUNIOR grade

CONKLIN, Robert Dan
Traffic Investigator
Oregon State Highway Department
Salem, Oregon
September 7, 1954 for JUNIOR grade

CONRADT, Robert
Assistant Traffic & Safety Engineer
State Highway Department
Santa Fe, New Mexico
September 15, 1954 for JUNIOR grade

DODGE, Eric Douglass
Transportation Analyst
Knappen-Tippetts-Abbett-McCarthy
62 West 47th Street
New York, N. Y.
August 25, 1954 for JUNIOR grade

HUGET, Howard Walter
Office Engineer
Multnomah County Road Department
2115 S. E. Morrison Street
Portland, Oregon
September 3, 1954 for JUNIOR grade

HYMAN, Meyer Kahn
Assistant Highway Traffic Engineer
Division of Highways (District IV)
150 Oak Street
San Francisco, California
August 31, 1954 for MEMBER grade

LAPIN, Howard Sidney
Junior Research Engineer
Institute of Transportation and Traffic Engineering
University of California
September 17, 1954 for JUNIOR grade

MATTHEWS, Roy W.
Assistant Traffic Engineer
Division of Highways
Sacramento, California
August 24, 1954 for ASSOCIATE grade

MEYER, James W.
Chief, Traffic Engineering Division
City Hall
Berkeley, California
August 27, 1954 for ASSOCIATE grade

ROBBINS, Donald O.
Junior Civil Engineer
California Division of Highways
San Diego, California
August 25, 1954 for JUNIOR grade

ROBINSON, Carroll M.
Recorder Engineer
Oregon State Highway Department
Salem, Oregon
August 23, 1954 for ASSOCIATE grade

SCHROEDER, Robert Louis
Traffic Investigator
Traffic Engineering Division
State Highway Building
Salem, Oregon
September 3, 1954 for JUNIOR grade

SCHROEDER, Walter R.
Transportation Planning Engineer
City Hall
Stockton 2, California
August 30, 1954 for ASSOCIATE grade

SINEMUS, Herman Andrew
Assistant Traffic Engineer
City Traffic Engineering Department
226 West Washington Street
Fort Wayne, Indiana
September 16, 1954 for JUNIOR grade

STRONG, Charles Porter
Junior Civil Engineer
Division of Highways
4075 Taylor Street
San Diego, California
September 1, 1954 for JUNIOR grade

TOTH, Steve
Senior Assistant Traffic Engineer
Department of Streets and Traffic
112 East Jefferson, Det. 26
Detroit, Michigan
September 14, 1954 for ASSOCIATE grade

URBAN TRANSIT CONTROL AND FINANCING TRENDS

(Continued from page 18)

Meanwhile, efforts are being made to economize in operating costs, and a zone fare system continues under study, the report said.

Emphasizing that traffic congestion is adding to the transit system's difficulties, the report said: "We have already seen parking in congested areas banned during certain hours. If the welfare of the community dictates, it might well mean extension and further revisions in the limitations of the use of private automobiles."

In another development, the Municipal League of Seattle reported a strikingly large sentiment among its membership that the Seattle transit system, instead of raising fares, should receive a subsidy to offset operating losses.

Most of the league members who expressed themselves favored doubling parking meter rates to provide the money for such a subsidy.

League members were polled by the group's publication, *The Municipal News*. Of 141 replies, 52 were from regular patrons of the transit system and 89 from non-riders or irregular riders. Opposing further fare increases, both groups said a subsidy is inevitable.

Suggested as means of increasing patronage were rush-hour express service, zone fares, weekly passes and more service in off-peak hours.

Proposals volunteered as to means of raising funds for a subsidy included requiring school districts to make up transit losses in carrying school children; subsidizing transit from City and Light Department profits; increasing the sales or property tax; imposing a payroll tax and levying special taxes on parking lots and garages.

TWO for the price of ONE!

"The New York" One Way* arrow (type OW-10) has the legend on both sides and with its special punching may be mounted in numerous ways. Because this sign is immediately seen from either side, you mount only one in place of two . . . saving time and money. Buy 26 or more for

only 3.25 each

1-12 $3.75 13-25 $3.50

"U" Posts of highest quality carbon steel are always in stock.

*Other legends available - - - Write for complete details.

MUNICIPAL STREET SIGN CO., Inc.
773-7 Meeker Ave., B'klyn, N. Y.

Institute of Traffic Engineers
New Members and Transfers

Elected by Board of Direction September 26, 1954

TRANSFERS

BIERMAN, Melvin (Associate)
Traffic Engineer
Panama Canal Company
Balboa Heights, Canal Zone

BUTTERFIELD, Stephen Ernest (Member)
City Traffic Engineer
Philadelphia, Pennsylvania

EXNICIOS, John F. (Associate)
Assistant Traffic Engineer
Room 202, Howard Annex
537 St. Charles Avenue
New Orleans, Louisiana

HANNA, John Tyler (Member)
City Traffic Engineer
900 East Broad Street
Richmond, Virginia

HANSON, Daniel J. (Associate—as of January 1, 1955)
City Traffic Engineer
Room 306, City Hall
Peoria, Illinois

HOWARD, Harry, Jr. (Member)
City Traffic Engineer
City Hall
Jacksonville, Florida

LEVINSON, Herbert S. (Associate)
Associate Traffic Engineer
265 Church Street
New Haven, Connecticut

McDONALD, John Willard (Associate)
Assistant District Traffic V. Engineer
c/o California Division of Highways
50 Higuera Street
San Luis Obispo, California

PASTOR, Ralph (Associate)
Wing Staff Engineer and Installation Engineer
First Air Force
Mitchel Air Force Base
New York, New York

NEW MEMBERS

BARTELS, William Joseph (Junior)
Senior Traffic Engineer
Bureau of Traffic Safety, State of New Jersey
15 Southard Street
Trenton 9, New Jersey

COX, James Harold (Junior)
Assistant Design Engineer
Indiana State Highway Department
311 West Washington
Indianapolis, Indiana

DeNOBLE, Henry M. (Junior)
Director of Planning and Traffic Engineering
City Hall
Lubbock, Texas

DONDANVILLE, Laurence Arthur (Junior)
Traffic Engineer
DeLeuw, Cather & Company
150 North Wacker Drive
Chicago 6, Illinois

DURHAM, Harold Francis (Junior)
Junior Civil Engineer (Traffic)
Room 268, Civic Center Building
San Diego 1, California

GALLOWAY, William Grant (Junior)
Traffic Engineer III
Kentucky Department of Highways, Division of Traffic
Frankfort, Kentucky

GRAVES, Paul Bruce (Junior)
Assistant Design Engineer
Oklahoma State Highway Department
Oklahoma City, Oklahoma

HUNT, Thomas Dewick (Associate)
Traffic Engineer
911 County City Building
Seattle, Washington

IRELAND, Robert Root (Associate)
Engineer of Traffic Services
State Highway Commission
Masonic Temple Building
Topeka, Kansas

KING, Gerhart Felix (Junior)
Junior Civil Engineer
City of New York, Department of Traffic
100 Gold Street
New York, New York

MATTHEWS, Gerald (Member)
Chief Planning Engineer
525 West 13th Street South
P. O. Box 161
Salt Lake City, Utah

O'CONNER, David J. (Junior)
Assistant Traffic Engineer
4421 West Adams Street
Chicago, Illinois

PECHT, George A. (Associate)
Senior Designer
724 East Mason Street
Milwaukee 2, Wisconsin

REYNA P., Tomas E. (Associate)
National Commissioner of Traffic
Inspectoria Nacional del Transito
Parque Carabobo
Caracas, Venezuela

RICHAUD, George Jennings (Associate)
Superintendent of Roadways
317 Baronne Street
New Orleans 9, Louisiana

SCHEXNAYDER, Gerard Edgar, Sr. (Junior)
Assistant Traffic Engineer
Department of Public Streets
City of New Orleans
New Orleans, Louisiana

SPITZ, Salem (Junior)
Civil Engineering Associate
106 West 3rd Street
Los Angeles 19, California

WADE, Philip Edward (Junior)
Assistant Traffic Engineer
Traffic Division, Ontario Dept. of Highways
Room 1422, Parliament Buildings
Toronto, Canada

WHITESIDE, Robert Erwin (Junior)
Associate Traffic Engineer
Wilbur S. Smith & Associates
2840 Greenway Avenue
Winston-Salem, North Carolina

ZRALCK, Robert Louis (Junior)
Traffic Engineer II
Bureau of Street Traffic
Room 709, City Hall
Chicago, Illinois

Secretary's Column

The following report was presented to the 1954 Annual Business Meeting of the Institute at Kansas City, September 27th.

Apparently it has become traditional to require your Executive Secretary to present an extensive report of his year's work at each annual meeting. I bow to tradition, and if I see you fidgeting or nodding I shall be quick to forgive for I shall be reassured that you are being bored by tradition—and not my report.

Our 1953 year was not an outstandingly successful one in the financial sense although as Mr. Matson reported we did a little better than break even. In all probability 1954 will show a substantial profit due primarily to not paying the salary of someone to assist me with the magazine, as we have not yet been able to find a replacement for Mr. Nowell. I do not mean to imply that the proposed increase of annual dues to be discussed this afternoon is not vitally *necessary* to our continued well being. Because of assuming certain new financial obligations it is essential that the membership approve or even raise the new rates which have been proposed by the Board of Direction.

Board Meetings

The Board of Direction held four meetings during the administration year, the first at the Buffalo Statler Hotel last October 1st; the second at Washington's Statler January 11th, just prior to this year's Highway Research Board meeting; the third at Dearborn Inn near Detroit, June 12th and 13th, where the Board members were royally entertained by the Michigan Section; and the final meeting was held at this hotel yesterday.

Unquestionably the most important administrative decision reached by the Board was agreement to undertake a larger share in arrangement and conduct of future annual meetings. In addition to rotating the sites among the 6 districts, limiting the number, kind and expense of the various annual meeting events, guiding the development of the technical sessions, the Board will in the future underwrite all but about twenty-five per cent of the subsidization which is always necessary in financing our annual meetings. This additional financial obligation is the principal reason for asking for a dues increase. If the latter is approved much of the headache which has faced past local arrangements committees, including the Kansas City, will be eliminated—for it will no longer be necessary for the committee to pass the hat—at least to the extent which has been necessary in the past.

Headquarters Operations

We began the administration year with four employees. The magazine's Business Manager, Mr. Nowell, resigned the last of June to enter the Army. Mrs. Charles Karjanis, whom we employed as Miss Marie Mazza in January 1953, resigned this past month to assume the full time duties of housewife and mother. Needless to say, the two of us who were left, Miss Anne Leftwich and the writer watched the departures with much personal regret for they meant that each of us had to take on more duties and work harder. With nearly six years of service, Miss Leftwich with her multitude of accounting, billing, office routine and advertising account responsibilities as Office Manager, has not been able to take any vacation this year. Neither has the writer. Mrs. J. Edward Donnellan, Jr., joined the staff as of September 13th as Secretarial Assistant, but no replacement for Mr. Nowell has been found.

Headquarters' load of correspondence contiuues to grow. A two months' count of incoming mail this summer during the vacation season showed that the annual total is more than 7800 pieces of first-class mail; an average of 31 first-class pieces each working day.

General mailings sent out to the membership during the past year consisted of an employment availability questionnaire, the dues statements, the Nominating Committee report, the ballot for officers, the ballot on last year's amendment to the By-Laws, the advisory letter on the proposed By-Law amendment to be discussed this afternoon, the 1953 Proceedings; a statement of one of the Technical Committees, and the 1954 Yearbook. Approximately 32 thousand envelopes were addressed with the Addressograph machine for the distribution of the magazine and these general mailings.

All material for the twelve issues of the magazine, the 1953 Proceedings and the 1954 Yearbook was assembled, edited and proof-read.

Probably the most significant accomplishment was the inauguration late last year of a new procedure in handling membership applications by which most of the processing drudgery was shifted from individuals of the Membership Committee to the headquarters office. The new system is founded upon a maximum use of the photocopy machine wherever possible. Few members realize how much paper work is necessary in processing an application. In processing the 126 applications handled by the Board last year, for example, headquarters typed or carboned 3528 letters or forms, made 5670 photocopies for a total of 9200 sheets of paper which were dispatched in 1260 letters. These are minimum figures for many applications contain supplementary sheets of information.

Personnel Service

Again this year we distributed a questionnaire designed for those interested in seeking new employment. The return was not nearly so large as last year. Also this year's wage requirements of those interested in new positions in the main considerably exceed the maximum salary most potential employers are willing to pay. Consequently, there are still more unfilled positions than there are traffic engineers. We have been instrumental in making a number of placements this year, but many positions remain unfilled because of the low salary offered.

Publications

A satisfactory demand for Technical Bulletins 1, 2 and 3 has continued through the year. One thousand copies of Number 3 were reprinted in January.

Traffic Engineering Handbook

Sales of the handbook continue to average 75 per month, and are finally yielding a satisfactory profit. Sales revenue finally exceeded the costs of publication and promotion in October of last year, so the Institute is now receiving one-half of the current sales profits; the other half goes to the Association of Casualty and Surety Companies which underwrote all of the expenses of publication and promotion of the volume.

1953 Proceedings

Again this year a number of the Buffalo papers were printed in the magazine, with the type being saved for use in printing the Proceedings volume. While this procedure greatly delayed publication, it reduced publication costs which we were able to hold to $1250.93 for the 132-page volume. I believe it is the Board's hope to return to the former practice of publishing the 1954 Proceedings as soon after this meeting as may be possible, without previously

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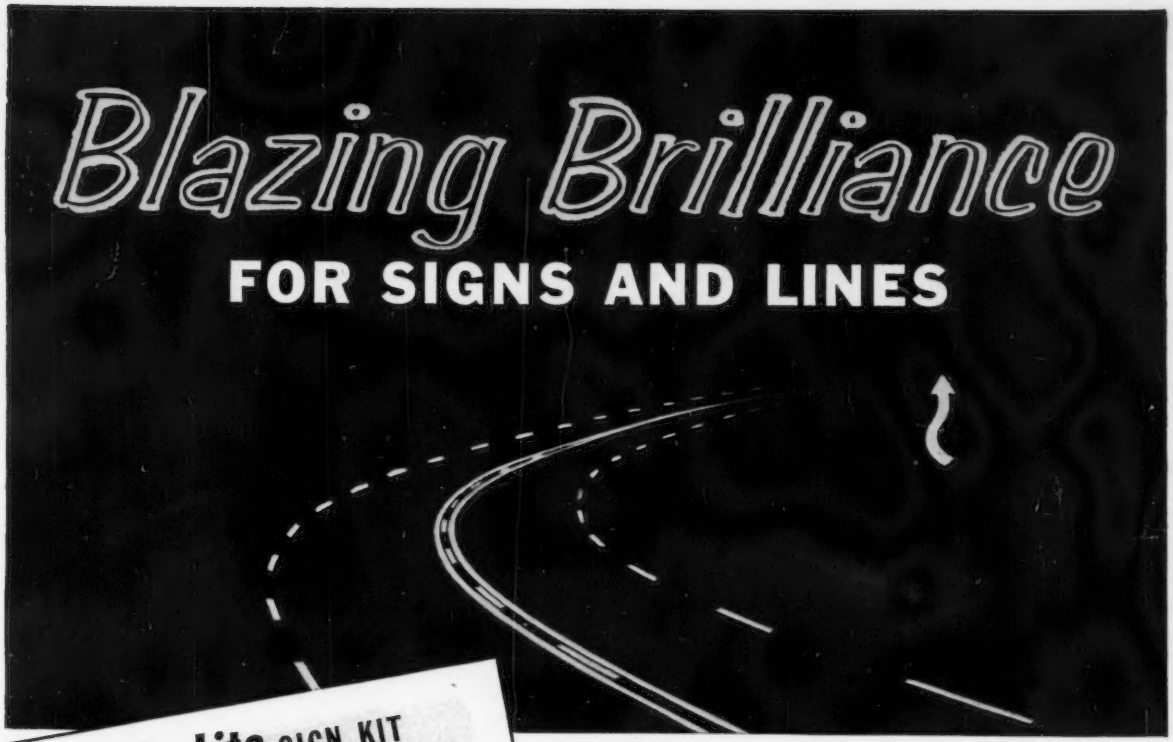

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printing any of the papers in the magazine. While this will increase our costs considerably, we believe it is a more satisfactory plan and one that best accords with the wishes of the membership.

Traffic Engineering Magazine

I'm sure you'll not think it boastful for me to say that our magazine has been improved during the year. Major credit for this is due the contributors who have furnished much interesting material and to our advertisers who by increased purchase of space made the improvement financially possible. This year's volume has more total pages than any before. The current issue, for which all feature material was prepared by Kansas City authors thanks to the efforts of Mr. Seburn, is the largest single issue we've ever printed—64 pages.

I particularly want to compliment the work of Associate Editor, Martin Stark, who is again providing the excellent index for the volume, as he has done for several years.

LOCAL SECTIONS—STUDENT CHAPTERS

Three of the four authorized Student Chapters and all of the eleven Local Sections were quite active during the year. Two new sections were organized, one of which, the Southern, absorbed the inactive former Florida Section. The Southern, second in size in territory only to the Western, has a potential of nearly 100 members. The other new Section, Texas, while rather small in membership, has already started the publication of a most interesting monthly newsletter.

MEMBERSHIP

The efforts of both your Committee on New Members and the Membership Committee have again been productive this year. At the beginning of the year 24 applications were pending. During the year, 153 applications were submitted to Headquarters, of which 94 were for new admission and the remainder were for transfer. Work on 129 of these was completed by both the Committee and the Board, resulting in 41 transfers and the election of 83 new members. There are (or were last week) 6 applications under consideration in the Membership Committee and 42 in Headquarters were in process before submission to the Committee. In the latter two groups 31 applications were for admittance and 17 for transfer.

The 83 new members elected during the year plus 1 reinstatement was 7 less than in 1952-53. There were 7 deaths, 3 resignations and 4 dropped for delinquency, resulting in a net increase of 70 which added to last year's membership of 758 (erroneously reported as 755) raises our membership total to an 828 high. I would like to add that this represents a total gain of some 31 per cent in membership since I became Executive Secretary 2½ years ago.

CONCLUSION

In conclusion, I want to express my appreciation for the guidance and understanding of President McNeil, the patience and tolerance of the Board of Direction, the splendid cooperation and loyalty of the headquarters staff, the work of the administrative and technical committees. My thanks, too, to the Yale Bureau of Highway Traffic for the housing accommodations furnished headquarters, to all of our sustaining organizations who helped with our financing, to all of the authors and others who contributed so much to the success of our magazine, to all the advertisers who have been generous with their business to the magazine, and to all the membership represented in you here this afternoon for the unfailing kindness which has been mine I say truly, I thank you.

M. M. TODD
Executive Secretary

ON THE SHELF

Compiled by
Mrs. Kathryn Cassidy, Librarian
Yale Bureau of Highway Traffic

The publications herewith listed are not available for distribution by the Bureau or the Institute. Inquiries should be directed to the agency listed as publishing the material.

Christie, A. W.

Road Surfaces as Reflectors of Light, From the Point of View of Street Lighting. Reprinted from Chemistry and Industry, 1953, pp. 468-475.

In this paper the progress of the research in reflection properties of various surfaces is reviewed, some of the data which have been obtained are given, and the various problems which are being investigated are discussed.

Cambridge Highlands, Massachusetts. Cambridge Planning Board.

Plan for Cambridge Highlands. The board. 1952. 13 pp.

This is a second in a series of detailed plans and forms a part of the general plan for Cambridge. The plan includes measures to provide needed public facilities in scale with neighborhood needs, to protect the area from industrial encroachment, to provide sites for new homes, and to facilitate potential but limited industrial expansion that will bring additional tax revenue to the City.

Charlesworth, G.

Parking Surveys. Reprinted from "Roads and Road Construction," May, 1953 (Rds. and Rd. Constr. 1953, 31, (365), 130-134.

This article gives information on methods of surveying existing street parking and is based on experience at the Road Research Laboratory, on work done by the Ministry of Transport in 1947 on methods of making parking surveys and on work by the City Engineer of Leeds, England.

Chester, Pennsylvania. State Department of Highways. Planning and Traffic Division.

Chester Metropolitan Aera Traffic Survey. The Department. 1952. 119 pp.

In an effort to secure comprehensive factual data regarding the existing traffic condition in the whole Chester metropolitan area this report has been prepared, with the cooperation of the U. S. Bureau of Public Roads, to present the basic data obtained but does not include any analyses of relief facilities.

Davies, Audrey M.

School Crossing Guards: a Major Police Development. Institute of Public Administration, 684 Park Avenue, New York 21, New York. 26 pp. 1953.

A survey of major police departments employing men or women guards on a part time basis for the protection of children at school crossings establishes extensive benefits resulting from such a program. It increases the number of police available for regular duty, obviates the need for an inefficient and uneconomical use of the professional force, produces substantial financial savings in many departments, provides a qualified, trained personnel to work as needed without interruption for other duties, makes it possible to give protection at more school crossings than might otherwise be feasible and raises the standard of traffic safety for children at school crossings.

(Continued on page 42)

Would Permit Parking Ticket Payoffs at Baltimore Banks

Early last month Chief Traffic Magistrate Stanley Scherr of Baltimore proposed a unique plan under which motorists would be able to pay off their traffic tickets at the nearest bank.

Scherr expressed belief that if Baltimore's 68 banks and branches acted as collecting points for fines, thousands of people who now delay their payments would pay up more promptly.

He noted that even with improved Traffic Court machinery and "drives" against old tickets, some 45 to 50 per cent of the violators still fail to pay up within the required time to avoid a second notice or warrant. He said he believed this was primarily because thousands of people do not have checking accounts, and that the "inconvenience" of getting money orders for mail payments or going to Traffic Court personally caused them to put off the tickets.

The magistrate said he had discussed his plan with the city's financial officers and they approve it. Banks in Baltimore already serve as collecting points for city taxes. Further conferences with city and state legal officers were planned on the new proposal.

If adopted, Baltimore would be the first city in the nation to use such a plan for collecting traffic ticket fines, but Scherr believes other cities would follow suit.

Under Scherr's plan, tickets for all offenses not requiring personal appearance could be paid at any bank within five days of the date the ticket was issued. It was explained the five-day limit would be set to clear the tickets before they were set down for hearing or second notices in the Traffic Court.

Noting that the Baltimore Traffic Court's business has already grown to the point where it did a $1,096,000 business in fines last year, Scherr said:

"The number of tickets is bound to increase as more cars appear on the streets, more no-parking regulations go into effect and more policemen are added to the force as potential ticket-givers."

Under the bank collection plan, Scherr said, the revenue could be expected to increase, while the number of "second notices," involving extra paper work and police service, might be reduced.

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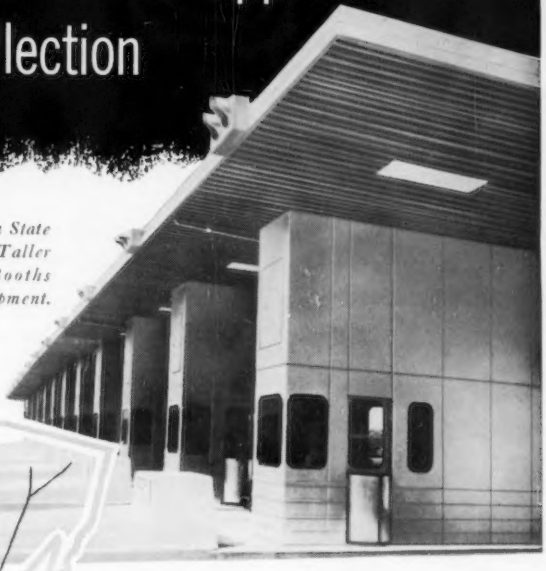

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ON THE SHELF

(Continued from page 40)

Cleveland, Ohio. City Planning Commission.

Cleveland Downtown Parking Survey. The Commission. 1952. 43 pp. (Final Report.)

The highlights of this survey have already been published in a brief preliminary report entitled "Our Downtown Parking Headache and How We Can Cure It." Presented here is a full summary of the masses of statistical data gathered for the only thorough parking study ever made of downtown Cleveland.

Faustman, D. J.

Report on Utility of One-Way Streets in Downtown San Jose, California. 1953. 5 pp.

The report contains a factual analysis of traffic conditions in downtown San Jose, and on the basis of such an analysis presents various recommendations for the use of one-way streets and parking prohibitions for the solution of present and future traffic problems.

Fisher, Yule and Bruce, Barbara.

Weighed . . . and Found Wanting; the Experience of Ten States Which Have Tried and Rejected the Ton-Mile Tax. The National Highway Users Conference, National Press Building, Washington 4, D. C. 11 pp.

The experiences of Georgia, Idaho, Iowa, Kentucky, Minnesota, Oklahoma, Tennessee, Utah, West Virginia and Wisconsin — having imposed ton-mile or other similar mileage taxes, and then rejected them completely or modified them substantially. The mileage taxes proved impractical for the following general reasons: (1) They were difficult to administer; (2) They were very unpopular among those who were taxed; (3) Administration costs were high in proportion to revenue obtained and (4) They raised obstacles to working out reciprocity agreements with other states.

Fletcher, Edwin D.

An Investigation of Glare Resistance and Its Relationship to Age; An Investigation of Glare Resistance and Its Relationship to Eye Color; An Investigation of Glare Resistance and Its Relationship to Race. A previously unpublished research report originally presented to the Department of Psychology, University of Southern California, Los Angeles. "Motorists' Vision," Optometric Extension Program, Duncan, Oklahoma, October, 1952 - February, 1953, Vol. 4, No. 1 - Vol 5, No. 5.

The actual study of the age-glare resistance relationship, presented here in three installments, was undertaken in two sections; a preliminary one to determine whether two groups of differing chronological age varied in ability to resist glare, and a major one to conclude the correlation of glare resistance with age.

The second investigation was undertaken to determine what relationship exists between eye color and the ability to resist glare, as measured on the Glare Resistance Test. A relationship does exist and one conclusion drawn is that blue-eyed persons tend to be more sensitive to glare than do brown-eyed persons.

It was the purpose of the third study to determine the relative ability of Negroes and whites to resist glare. The Glare Resistance Test was administered and the Negroes demonstrated significantly better resistance to glare, declining less rapidly with age than whites.

Grand Rapids, Michigan. State Highway Department. Planning and Traffic Division.

The Grand Rapids Metropolitan Area Traffic Study. The Division. 1953. 69 pp.

This report presents the selection of an urban state trunkline system in the Grand Rapids metropolitan area.

Highway Research Board.

Road-User Characteristics. The Board. 1952. 66 pp. (Bulletin No. 60.)

Contains: Development of criteria of safe motor-vehicle operation — J. E. Uhlaner, Leon G. Goldstein, and N. J. Van Steenberg; Relation between psychological tests and driver performance —D. J. Moffie, Andrew Symmes, and Charles R. Milton; Age and sex relation to accidents—A. R. Lauer; Human factors in highway-transport safety—Ross A. McFarland; Analysis of certain variables related to sign legibility—H. W. Case, J. L. Michael, G. E. Mount, and R. Brenner; 35-Millimeter airphotos for the study of driver behavior — T. W. Forbes and Robert J. Reiss.

Highway Research Board.

Traffic-Accident Studies. The Board, 2101 Constitution Avenue, Washington 25, D. C., 1953. Bulletin No. 74. 53 pp.

Contains: Traffic-accident trends, by David M. Baldwin; Relation between number of accidents and traffic volume at divided-highway intersections, by John W. McDonald; Interstate highway-accident study, by Morton S. Raff; Relation of traffic signals to intersection accidents, by J. Carl McMonagle.

New Appointments

Ward Becomes Asst. Director of HRB

Mr. G. Donald Kennedy, Chairman of the Executive Committee of the Highway Research Board, recently announced the appointment of Mr. Elmer M. Ward, as Assistant Director.

Mr. Ward joined the technical staff of the Board in 1946 as Engineer of Maintenance and in 1949 was also made Engineer of Materials and Construction and has served in these capacities until his present promotion.

Mr. Ward holds a degree in Civil Engineering from Iowa State College and spent 14 years with the Iowa State Highway Commission after graduation. From 1941 to 1946 he served on the staff of the Military Roads Branch, Research and Development Board at Belvoir, Virginia. He is a member of the American Society of Civil Engineers.

Foulis Named to Foundation Staff

William S. Foulis, formerly of Denver, Colo., will represent the Automotive Safety Foundation in the 11 western states, it was announced recently by J. O. Matson, Foundation president.

Mr. Foulis is making his home in Palo Alto, California, where he also maintains headquarters as Assistant to the President of the Foundation. The position was held by Mr. Matson prior to his assuming the presidency of the organization last November.

During the 18 months prior to his appointment, Mr. Foulis was Assistant Director of Public Relations and Development of the University of Denver, and for five years before that he was Executive Director of the Colorado Highway Safety Council, in which position he became widely known throughout the country among traffic officials and experts.

A member of the Denver Press and Advertising Clubs, Mr. Foulis has a record of three years service with the U. S. Air Force, including 20 months in the European Theater during World War II. Before entering the safety field his experience was in radio broadcasting and public relations.

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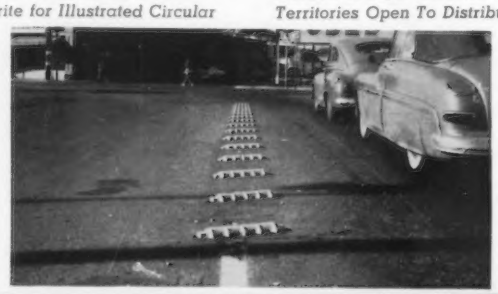

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BARTON, Eugene A. (Associate)
Traffic Engineer, H. K. Ferguson Co., 11th and Walnut Streets, Cleveland 14, Ohio.

CLIFFORD, Eugene J. (Junior)
Assistant Traffic Engineer, Montgomery County. Poplar 2-2121. SEND MAIL: Beach Road, Guilford Lakes, Connecticut.

FIANDER, Leslie O. (Junior)
Principal Assistant Traffic Engineer, Ontario Department of Roadways. Mayfair 6567. SEND MAIL: 34 Ivorwood Cres., c/o West Ellesmere P. O., Ontario, Canada.

KELL, James H. (Junior)
Institute of Transportation and Traffic Engineering, University of California, Berkeley 4, California.

LUTZ, Col. S. M., Jr. (Associate)
873 N. Patrick Henry Drive, Arlington, Virginia.

MARSH, Burton W. (Member)
Director, Traffic Engineering & Safety Department, AAA, 1712 G Street, N. W., Washington 6, D. C. MEtropolitan 8-4000. Ext. 441.

McCROSKY, Theodore T. (Member)
Consulting Engineer, Room 907, 23 East 26th Street, New York 10, N. Y. MUrray Hill 3-4780.

McGLASHON, Donald W. (Associate)
3885 La Donna Street, Palo Alto, Calif.

PALMER, James R. (Member)
Director of Public Works. SEND MAIL: 1632-18th Avenue (Apt. 6), Rock Island, Illinois.

PEMBERTON, Charles A. (Associate)
Director, Traffic Safety Division, Arizona Highway Department. SEND MAIL: 125 East Lawrence Street, Phoenix, Arizona.

RICH, Marshall M. (Associate)
Associate Traffic Engineer, Wilbur Smith & Associates. 3-0503. SEND MAIL: 5009 Sylvan Road, Richmond, Virginia.

SEBURN, Thomas J. (Member)
Research Associate, Yale Bureau of Highway Traffic, 311 Strathcona Hall, New Haven, Connecticut.

STANFORD, Malcolm R. (Junior)
Traffic Representative of Road Department, Planning Section, Los Angeles County Road Department. SEND MAIL: 1691 Kempton Avenue, Monterey Park, California.

VAN TIL, Cecil J. (Junior)
Area Engineer, The Asphalt Institute, Russ Building, San Francisco 4, Calif.

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